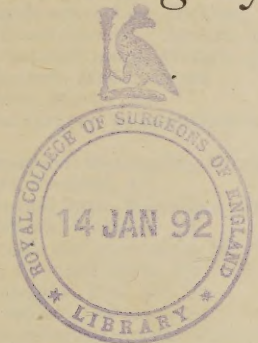


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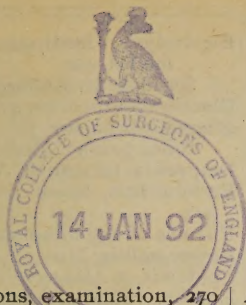


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¹ Clinic at Philadelphia Hospital, May 13, 1891.

ure of the pus, and so an abscess should have been suggested, and an exploratory puncture would have found it, I am sure.

Now, examining this abscess cavity, you see it is a large one on the under surface of the gland, at least four inches in its diameter, with rough, irregular walls, and trabeculae of altered blood-vessels or ducts crossing its cavity. But a thin layer of liver lies beneath it; while, overlying it, the thick mass would have defied all efforts to secure fluctuation. The abscess is confined to the right lobe.

There were no intestinal lesions to account for the existence of the abscess.

The absence of nodulation, easily palpable where the liver is below the costal border, and the presence of fever would have excluded the more slowly developing carcinomata nodules although in that disease the temperature sometimes rises above normal.

Original Articles.

"SOFTENING OF THE BRAIN."

By S. V. CLEVENGER, M.D.,

Secretary and Fellow of the Chicago Academy of Medicine, Formerly Pathologist County Insane Asylum, Chicago, etc.

IT is a common experience for physicians connected with insane asylums to have every conceivable form of insanity sent to them as "softening of the brain," and the cause of this prevalent ignorance is no exception to the universal rule that there is a reason for everything.

In the first place, the brain being the acknowledged seat of the intellect, "softening" of one, in the popular estimation, should appropriately be associated with a like condition of the other, and thus fact and metaphor become mixed; and this misuse of terms too often has the sanction of the old family doctor, who sees a case or two of insanity during his lifetime. Imagine the disgust of this same honest old physician if some professional brother were to use the word "dropsy" in its lay sense, as satisfactorily accounting for any one of the many diseases of which it is a termination or symptom. Yet, there is far greater justification for the use of the word "dropsy" as an omnibus, because it describes an actual, objective condition, which no one informed in cerebral pathology would claim similarly to be the case in insanity; either as a cause, or a result of the causes of, the mental ailment.

Coupled with this convenience of the term for those who vaguely regard the brain as a mass of fatty substance enclosed in a bony box, there is a traditional warrant for "softening of the brain" dating from the time when arteries were so named because they were supposed to contain air, and handed down with the expression, "blue blood in his veins."

In remote ages the devil was regarded as responsible for all ailments whatsoever, precisely as our Indians of to-day preserve that belief as a survival from the ideas of our common primitive ancestry. Physical causes for ordinary bodily troubles were acknowledged as sufficient explanations centuries before diabolism dared to be questioned in connection with "spiritual" maladies; and considering the ages usually required to educate "*homo sapiens*," out of fetishism we really should congratulate ourselves that such an expression as "softening of the brain" exists to foster the conception among the *hoi polloi* that insanity is any kind of a cerebral disease.

To be "wounded unto death" was all the olden leech cared to know was the condition of his patient, and the pathology, diagnosis, and prognosis were combined in those words, as sagely as the therapeutics of the time required the sword that caused the wound to be anointed.

When the human intellect had advanced to the idea that there were different kinds of sicknesses, the great distinction was made between insanity and lunacy in the assertion that the moon's phases controlled the last named, thus relieving the devil of part of the odium, until the introduction of "softening of the brain" transferred the entire responsibility.

But terms often outlive their usefulness and become positively obstructive to the spread of knowledge, and in the matter under discussion we have an instance.

Many physicians in general practice and specialists in other than alienistic fields, all of whom may be excellently educated men in other respects, are unaware of the advances psychiatry has made in the last half century, but opportunities for informing themselves are increasing, and "Spitzka's Manual" is now as indispensable as "Niemeyer's Practice," whether the library is overstocked or contains but an armful of books. And in this "Treatise on Insanity" by Spitzka "softening of the brain" will not be found in the index, and is mentioned but once in the book, on p. 194, in connection with parietic dementia: "Quackery treats this disease as brain softening." He did not consider it necessary to allude to the popular use of the words.

Early in this century a scientific nomenclature was used in European asylums to the exclusion of expressions in common use, notwithstanding the fact that to within recent years the German alienist occasionally catered to the vernacular to the extent of using "*Gehirnerweichung der Irren*," for which parietic dementia was the exact equivalent, and the name did not embrace everything else, though "*Grössenwahnsinn*" did erroneously include monomania and parietic dementia, or grandiose insanities generally. The French rather uniformly restricted "*ramollissement*" to the pathological condition. English alienists, as a rule, were not behind their Continental colleagues, but several writers, who undertook to instruct practitioners in general, were unfortunate enough to perpetrate the error.

Just as in schools we find some excellent and some very indifferent teachers, so in every cyclopædia there are first-class articles written by authors who are masters of their subjects, sandwiched between inferior essays.

In 1866, Reynolds and Bastian published in "Reynolds' System of Medicine," Vol. I, p. 856, a dissertation upon Softening of the Brain. The subsequent editions did not change the text, and the foot-notes contain references to writings of the earlier part of this century, and nothing later than 1867 is quoted. In the main this article embodies the information and misinformation of thirty years ago. Great advances in special knowledge have been made since that time, particularly with regard to the brain and its functions, and it is now known that the same symptoms, described under that head, may occur where there is no softening of the brain at all, or in very many differing conditions, such as are induced by atheromatous arteries, aneurisms, syphilis, meningeal disease, tumors, embolisms, thromboses, extravasations, etc., depending upon what part of the brain is diseased, and the degree of the damage.

Robert T. Edes, in "Pepper's System of Medicine," Vol. V., p. 989, briefly reviews the present *status* of softening of the brain, by stating that it "is a name which it is yet too early to omit altogether from a systematic work, although in treating of it we have more to do with nomenclature and classification than with pathological anatomy. The phrase may be said to have both an anatomical and a clinical significance, which do not coincide at all points. Clinically and among the laity it is used to express various symptoms and groups of symptoms more or less referable to the brain, some of them connected with one and some with another lesion, and many purely functional—if the word may be used—or at any rate unconnected with any known or definite lesion.

"Vertigo, dull headache, sleeplessness, or, on the other hand, drowsiness, failure of memory, failure of power of concentration, of steady application, mental depression, fatigue, and even slight aphasia or actual slight hemiplegia, may any of them be considered symptoms or forerunners of softening of the brain. As nearly as anything the popular notion of this affection corresponds to general paralysis of the insane or senile dementia, or even mere exhaustion."

Edes then goes on to state that "a general softening of the whole brain, such as seems to be the condition supposed when the phrase is used, cannot and does not exist, since a vascular lesion sufficient to cause anæmic necrosis of the whole brain must cause death long before softening would have time to take place."

Winslow, in 1866, "On the Brain and Mind," uses the words in their olden ambiguous sense, though his work is useful to day as referring to many alienistic points not touched upon by most authors.

Dickson, in 1874, "Medicine in Relation to the Mind," p. 385, says that "sometimes in the insane we find softening, and much has been made of it. It is highly probable, however, that many of the pathological conditions of the brain, found upon the *post-mortem* table in autopsies of the insane, are accidental, and particularly the condition of softening. I know of no form of insanity, for instance, which can be said to be the result of softening of the brain. I have often heard people speak of 'softening of the brain,' but I candidly confess I do not know what is meant by the expression."

Rush, "On the Diseases of the Mind," 1812, does not use "softening" to designate any form of insanity," but mentions (p. 23) that "we sometimes discover preternatural softness in the brain in persons who die of madness, similar to that which we find in other viscera from common and febrile diseases. This has been observed to occur most frequently in the liver and spleen. The brain in this case partakes of its texture and imbecility in infancy, and hence its inability to receive and modify the impressions which excite thought in the mind."

Isaac Ray, "Medical Jurisprudence of Insanity," 1838, avoids any allusion whatever to the expression under discussion, an indication of his disbelief in the association of such a pathological condition with insanity.

Niemeyer, Vol. II, p. 175, describes, in his complete and lucid way, the secondary degeneration of the brain following upon embolism, etc., the date of his first edition being 1858, and to his work and the recent publication of Strümpell, p. 698, the practitioner can refer for details as to what actually constitutes "softening." The latter mentions dementia from senile softening rather unguardedly, for the admitted arterio-sclerosis is more properly to be regarded

as the cause of both the mental and cerebral degeneration.

An embolism, a thrombus, or syphilitic degeneration of an artery, or, in fact, any condition that will cut off nutrition from a brain region, may secondarily give rise to softening, but the paralysis, speech failure, word blindness or deafness, associated with such states, are caused by the initial lesion and not by the softening, as a rule, unless the latter extends beyond its original limits, and in any event there is no justification for the vulgar use of the term "softening of the brain" in connection with insanity.

Psychiatry is a recent science, but it is fully enough developed to warrant its being taught in every medical school. The clinical features of many forms of insanity are as clearly definable as are those of the common diseases. We may with advantage look over some of these mental derangements that have been ignorantly dumped into "softening of the brain."

Idiocy.—A defective development of the brain with which softening has no more connection than it has with arrested development of any other organ.

Imbecility, and its lesser degree "feeble mindedness," are also states of arrested or perverted developments, the functional manifestations of which are less profound than in idiocy and equally unassociated with "softening."

Hebephrenia, or the insanity of puberty, is likewise an evolutionary failure, characterized by silliness and mischievousness, with occasional emotional outbursts, but there is no more "softening" about it than there would be in prolonged retention of the deciduous teeth.

Paranoia, or what was formerly mistakenly called "monomania," is similarly a developmental faultiness, resulting in logical perversion. Under this designation comes the great army of "cranks." Want of symmetry in brain shape, misplaced portions of gray matter, etc., found in this defect do not warrant its inclusion under "softening."

The mere names of such "complicating insanities," as Spitzka calls them, as *traumatic*, *choreic*, *post-febrile*, *rheumatic*, *gouty*, *phthisical*, *pellagrous*, are sufficiently etiological to defend them against being considered "softening," but unfortunately the behavior of the patient at some stages may not be furious enough to save them from the appellation.

Mania, in some of its less exuberant forms, has been pronounced a case of "softening," and the injustice of this appears when we remember that the friends of the patient regard the latter as an incurable trouble, while we are justified in holding out much hope in many cases of simple mania (which must not be confounded with the maniacal *condition* or, properly speaking, furor of other forms).

Melancholia agitata is often mistaken for mania because the terror in this state induces aggressive acts of self defense.

Melancholia attonita, or thunderstruck melancholia, is a terribly agonizing depression.

Simple melancholia which often ends in suicide, unexpectedly, because regarded as a "fit of the blues" from its apparent insignificance.

Nutritional disturbances are at the root of the melancholic disorders but never to the extent of "softening."

Katatonía alternates mania, melancholia and catalepsy, without demonstrable brain lesion. It is not a frequently found psychosis, but it does not escape the omnibus designation "softening." Very often this disorder, which, since Kahlbaum's description,

should be as well recognized as pneumonia, figures in our daily papers as "a wonderful mental derangement baffling all the physicians." Great contests of opinion have occurred over katatoniacs who have been arrested for homicide, because at some periods they appear to be sane and at others are unmistakably insane.

Transitory frenzy is not of long enough duration to be called "softening," but it has often been mistaken for delirium tremens or epileptic furor, or denied altogether as real, if crime were committed during an attack.

Stuporous insanity, or what has been known in asylums as primary dementia, is such a very mushy mannered ailment, in that the patient vegetates rather than has animal existence, the title "softening" is more than liable to be applied, until the sudden recovery that follows discomfits the diagnosis.

Confusional insanity is to mania what stuporous insanity is to melancholia. It also rapidly ends in recovery, and probably it will be acknowledged that "softening" is too destructive to terminate favorably.

Syphilitic dementia has peculiar clinical phases enabling it to be often recognized as such, before determining the cause, but all this escapes the "softening" diagnostician.

Delirium grave, or acute delirious mania, is so painfully furious that "hardening" rather than "softening" would better apply metaphorically, if we must have some lay cognomen. I reported a case of this kind in the *Journal of Neurology and Psychiatry*, 1883, in which I found the brain oedematous, and disintegration was so rapid *post-mortem* that but few portions of the brain could be preserved, but this was due to maceration occurring *ante-mortem*, rather than to "softening."

Alcoholic insanity, often confused with delirium tremens, usually has the cause so palpably apparent that it escapes the objectionable title, and all the more readily as whiskey is known to harden the brain. The five-cent physiologies taught in a five-cent manner in common schools contain this information.

Hysterical insanity is dubbed puerperal, religious, etc., according to the most prominent circumstances or manner of exhibition attending the outbreak, and so it usually, but not invariably, escapes the misnomer.

Epileptic insanity, whether the mania is before, after, or between attacks, is seldom miscalled, unless the masked variety is the form.

Terminal dementia is the asylum designation for the final stages into which all insanities sink. In the vast majority of cases that die in this stage we find atrophic, sclerosed brains, hence the "softening" of the intellect is in reality a brain *hardening*.

The remaining divisions of insanity to be mentioned are of especial medico-legal importance, and the ignorant application of the title "softening of the brain" to these has often wrought great injustice.

Paretic dementia is the "softening of the brain" *par excellence* of the populace, but its actualities are so little known to general physicians and the public, that all sort of insane misjudgment is associated with its appearance. Recently the newspapers have taken to calling it "paresis," hence the readers are alarmed over the idea that a new mental disease has appeared, and some of the popular notions concerning its cause are unique. It is a fatal disorder, running its course in three years, on the average. John McCullough's was a typical case, and it is reported that some sanitarium sage stated that he could have cured

the patient had the latter been treated soon enough. When "doctors" know nothing of a disorder, and the public even less, such statements are gulped, and earn more practice. The pathology of paretic dementia is definitely established. Sclerosis is a common feature in cortical parts.

Sometimes paretics give great annoyance to asylum officials through *habeas corpus* proceedings and court ventilations of alleged cruelties, etc. The remarkable vigor, and industry, and feverish intelligence of some of these cases win the rabble over to their views, and they are carried out of court on the shoulders of the mob, which denounces the experts, and which vanishes out of sight and hearing when time proves these experts to be right.

Not but that atrocities do exist in many political asylums; but the real wrongs escape knowledge, the real culprits are catered to, while appearances are too often turned against the honest and kindly administration.

As Herbert Spencer says, the untrained imagine that they *must* have an opinion ready upon every possible subject, and it is rare to hear the frank admission "I don't know" from those who really do not know. Every one knows apparently what "softening of the brain" is, and when insanity does not come up to their inspired notions of what it should be, the well intentioned lashes himself into indignation over wrongs that do not exist, and derides the possibility of the existence of those that are well-known as flagrant actualities. The enthusiasm of the young alienist who intends to reform the world gives way to dejected hopelessness and apathy. "The gods themselves strive in vain against ignorance."

Frank Collier, an attorney of Chicago, has been furnishing newspaper sensations for the past few years, often posing satisfactorily as a much martyred man, till the insanity became so very, very evident that there came a great hush over the persecutions, and small paragraphs noted the last assault or maniacal fury instead of the columns of abuse of experts.

After an address to a public meeting, concerning the brutalities at our county insane asylum, a lady said, "Doctor, you occasionally mentioned paretic dementia, I never heard of the disease before, what is it?" To save a lengthy discourse I replied that it was what had often been called "softening of the brain." "Oh!" she ejaculated, and sat down, convinced that she now understood it, and a little disgusted at the tendency doctors have to use unheard of names. I was once reproved by a country dame for speaking of perspiration when I meant sweat. "You doctors use such long names," she said.

Atheromatous insanity, so named by August Voisin ("Lecons Cliniques sur les Maladies Mentales," 1883, p. 79), in Spitzka's first edition was called "Primary Mental Deterioration," is often mistaken for paretic dementia and senile dementia, but it differs from both in its decided apathy. The recent name indicates its pathology. Of course this is a popular "softening," for business men when thus afflicted lose all ability to manage their affairs.

Senile dementia may be called a pathological exaggeration of senility, and figures in will contests wherein undue influence is sometimes alleged. Often there is paresis or paraplegia, vulgarity, irritability, great penuriousness and delusions of being robbed. Their mental failures enable designing persons to prejudice them against those to whom during sanity they were affectionately disposed. Millions of dollars have been fraudulently captured from victims of this insanity, and the court proceedings have been bungled

by want of correct information on the part of both plaintiffs and defendants. Our old chestnut "softening" has figured *ad nauseum* in these cases, and probate judges and juries might just as well have pulled straws for verdicts.

In cases of simple hemiplegia in old people, when the intellect may have been comparatively undisturbed, the pathological fact that softening of the brain really does often supervene, has been taken advantage of or confused with the popular idea of the condition, to the prejudice of justice, aiding wrong conceptions, and confusing innocence.

Testamentary capacity may exist in spite of right-sided hemiplegia with aphasia, but the instant the admission is made that softening may follow upon the extravasation, or embolism that caused the apoplexy, the judge and jury receive an erroneous impression that may wreck a home, defraud widows and orphans, and divert fortunes from the direction intended by the testator.

Society Notes.

INDIANA STATE MEDICAL SOCIETY.

SOME FALLACIES IN GYNECOLOGY

WAS the subject of an able paper read by DR. FRANK C. FERGUSON, at the forty-second meeting of the Indiana State Medical Society at Indianapolis, June 10, 1891. He said that twenty-five years ago gynecology was in a crude and chaotic state, there were a hundred fallacies to one well-authenticated fact. Sims, in our own country, Baker-Brown, in England, and Simon, of Germany, laid the foundation upon which has been built the rational and scientific treatment of diseases peculiar to women, but the fallacies which were once taught as facts, have taken such deep root in both the professional and non-professional mind, that many physicians have failed to appreciate or adopt the modern advances in gynecology, which have exploded much of the pathology of the writers of former years.

The pessary fallacy is a most pernicious one. An era of pessary invention was ushered in by Prof. Hodge, who adopted the theory that displacements of the uterus were the cause of almost all uterine ailments, and who introduced the treatment by mechanical appliances. The pessary craze still has a firm hold, not only upon women, but clings tenaciously to the majority of the profession. There are some cases where well-adjusted pessary serves a good purpose as an adjunct to the cure or promoter of the comfort of the patient, but the indiscriminate, unscientific, and, perhaps, criminal use of passaries by amateur gynecologists, and physicians experienced in general practice, but unskilled in gynecology, is only mentioned to be condemned in the strongest terms.

Another fallacy is "the ulceration of the os" fallacy. However much our predecessors may have been justified in calling "ulceration," that characteristic affection of the uterus now known as "laceration," there can be no excuse to-day for the perpetuation of this erroneous idea.

Another fallacy is, that laceration of the cervix necessarily requires an operation for its cure. While I believe that Lawson Tait has gone too far in denouncing Emmet's operation as one of the most useless ever invented, my own experience has taught me that the great majority of cases of laceration of

the cervix can be cured without subjecting the victims to a dangerous operation and inconvenience of enforced confinement in bed for weeks. What is there in the anatomical structure of the cervix that can prevent nature from promptly healing it, provided there be not an acrid discharge pouring over the torn surface. During the past year I have operated upon but one case of laceration of the cervix, and have cured a dozen cases without operation.

A wide spread fallacy among physicians, and entertained almost universally among women, is that the "change of life" is necessarily a period of peculiar peril and intense suffering. Nothing could be further from the truth, and more harmful in its results. If a woman has good health and no organic disease of the reproductive organs, she will suffer nothing more at this period than slight nervous symptoms, such as flushes, slight headache, etc., the result of vaso-motor disturbances. If she has pain or hemorrhage, or profuse leucorrhœa, singly or combined, it is almost certain she is afflicted with organic disease as cancer, fibroid tumor, endometritis, salpingitis, or ovaritis. During the past year four women who had been under the care of excellent general practitioners for "change of life" have consulted me, and each one was found to have cancer of the cervix uteri in an advanced stage. Three of these are now in their graves. It is a fearful thing for a physician to assume to know what he does not, and through the egotism of ignorance becomes responsible for the death of a confiding and trusting woman.

A fallacy of firm hold in the minds of many is, that pruritus vulvæ is frequently a neurosis—that is to say, that it is of centric origin without any lesions of structure, or accompanying affections to account for it. Where uncleanly habits of the patients are not the cause, the trouble can be traced to some disease existing in the vagina, the uterus, or the bladder. There are many other fallacies which time forbids to mention.

The meeting was largely attended, two hundred and fifty physicians being present. The reports of the Secretary, Dr. E. S. Elder; Treasurer, Dr. Frank C. Ferguson, and the Committee on Necrology, Dr. J. E. Hibberd, Richmond, occupied a large part of the morning session, the first day.

The Alumni of the Medical College of Indiana, celebrated the twenty-first year of its existence by a banquet at the Dennison House Wednesday evening. More than two hundred of the members were present, and the occasion was highly enjoyable, both by the rich viands and the feast of reason and flow of wit which enlivened the wee sma' hours.

The officers for the coming year are: President, Dr. Edwin Walker, Evansville; Vice-President, Dr. Erwin Wright, Huntington; Secretary, Dr. E. S. Elder, Indianapolis; Assistant-Secretary, Dr. T. A. Kennedy, Shelbyville; Treasurer, Dr. J. O. Stiltsee, Indianapolis. Dr. Edwin Walker, the President, is the youngest man elected to that position for many years.

DR. THEODORE POTTER made an interesting report on

BACTERIOLOGICAL INVESTIGATIONS.

In the course of which he said, there is a growing belief that the older ideas of heredity are exaggerated; that disease is to be looked upon as an infection rather than an inheritance; that it is comparatively rarely transmitted from parent to child in course of nature. Yet, he added, the doctrine of heredity is

by no means overthrown, and we must still wait for the whole truth.

DR. J. W. MILLIGAN, of Indianapolis, read a paper on

ANTISEPTIC METHODS APPLIED TO OBSTETRICS.

This was thoroughly discussed, and soap and water received the most commendations as the most efficient disinfectant. Puerperal fever has existed for two hundred years, and it is time it is disappearing.

DR. C. MORRIS, of Rockville, read a paper on

THE SALICYLIC TREATMENT TYPHOID FEVER.

He said that salicylate of soda is an acknowledged germicide, and there is every reason for its use in typhoid and kindred diseases.

DR. J. A. SUTCLIFFE, of Indianapolis, had an interesting paper on

PERINEAL SECTION,

with a number of descriptive cases. Following this DR. C. H. SMITH, of Lebanon, treated of

ABORTION.

He spoke of those cases occasioned by accident or disease, and laid great stress on the patient having absolute physical and mental rest, and then relief from pain.

DR. OWEN:

WHAT SHOULD BE THE RELATION OF CONTRACT CORPORATION SURGEONS TO THE MEDICAL PROFESSION?

The subject was referred to a committee consisting of Drs. Owen, Hibberd and Sutcliffe, with instructions to report before the close of the meeting.

DR. M. F. PORTER, of Ft. Wayne, read a paper on

REPORT OF A CASE OF SARCOMA OF THE OVARY, OPERATION AND RECOVERY.

After this came a paper by DR. F. C. FERGUSON, of Indianapolis on

SOME FALLACIES IN GYNECOLOGY.

The topic

DIPHTHERIA

was handled by DR. W. A. MCCOY, of Madison, and the venerable Dr. Lomax said he had come across the term diphtherite in the beginning of his practice fifty-four years ago, and the disease soon after, hence it was not a product of modern civilization as sometimes supposed.

The address of the President, DR. GONZALVA C. SMYTHE, of Greencastle, on

THE INFLUENCE OF HEREDITY IN PRODUCING DISEASE AND DEGENERACY, AND ITS REMEDIES

was a very able one. He showed what might be determined from the standpoint of the biologist, and spoke of inebriety as a physical disease which may be inherited, the children of inebriates becoming perhaps epileptic, insane, or criminals. In a large proportion of cases the third and fourth generations from drunkards are criminals or paupers. He said the profession was face to face with one of the greatest problems in sociology which confront the present day. It is its duty to open up the way so the religious and civil authorities can follow. He proposed for the government to take the matter in hand, and

only admit those emigrants who can furnish a consular certificate that neither tuberculosis, scrofula, cancer, insanity, inebriety, crime or pauperism is hereditary in the families from which they sprung. It is a comparatively easy matter for the government to exclude from admission any more of these people thus diseased, but how to dispose of the stock now on hand will tax the best minds of the country. The State interposes no objection to the marriage and multiplication of these people. She licenses and legalizes a traffic which largely contributes to their propagation, and the influence of which will be handed down to posterity. It is the duty of the government, as a sanitary measure, to assume entire control of the manufacture and sale of alcohol. Every attribute of the human family might be improved, and new ones be possibly developed were science brought to the aid of sentiment in mating the sexes.

The first paper of the second day's session was by DR. A. B. RICHARDSON, of Cincinnati, on

HYSTERIA.

The manifestations of the disease he called "fugacious," and compared it to the cuckoo building no nest of its own, but steals into those prepared by other physiological processes.

DR. J. R. WEIST, of Richmond, reported the lamentable failure of the two bills before the last Congress in which this society had special interest. One of these was to protect physicians, editors and others against speculative lawsuits, the other for the regulation of expert medical testimony in court.

DR. A. W. BRAYTON, of Indianapolis, presented a girl, fourteen years old, afflicted with the extremely rare disease of the skin known as xeroderma pigmentosum, Kaposi's disease. This is the only case ever known in the Mississippi Valley, and the eleventh in the United States.

DR. G. W. MCCASKEY read a paper on

SOME NEEDED MEDICAL LEGISLATION.

Following this came a paper by DR. S. M. VORIS, of Columbus, on

LACERATIONS OF THE PERINEUM,

and one by DR. G. W. VERNON, of Indianapolis, on

VULVO VAGINITIS IN CHILDREN.

At the afternoon session papers were read by Drs. F. C. Woodburn, of Indianapolis, on Valvular Heart Disease; S. C. Evans, Union City, on Nasal and Naso-pharyngeal Reflexes; H. McCullough, Ft. Wayne, on Functional Aphonia; C. L. Thomas, Logansport, on Cataract, With or Without Iridectomy; Norman Teal, Kendallville, on Health and Vital Statistics; S. W. Gould, Argos, on Opium and Its Preparations; M. F. Johnson, Richmond, on Angina Pectoris.

When the last paper was read, President Smythe came forward and presented the newly elected President, Dr. Edwin Walker, to the convention. When the applause which greeted the presentation had subsided, Dr. Walker made a short address, and the Society adjourned to meet on the second Thursday in May, 1892.

DR. EDWIN WALKER, of Evansville, Indiana, read a paper before the Indiana State Medical Society on

ONE PHASE OF PUERPERAL SEPSIS.

The following is a short abstract: Midwives furnish most of the cases of puerperal fever. The intelligent

physician who applies modern principles rarely has one. Puerperal sepsis is the result of the introduction into the genitals of a specific poison. This may enter the circulation by lacerations or extend to uterus, tubes or peritoneum. The first thing is to determine the location of the poison and to remove when possible.

The special class of cases referred to in this paper is that in which the morbid material forms a focus of inflammation involving the tubes and peritoneum.

The tumor found in such patients is composed of tube, enlarged and inflamed adherent intestine and often pus. Three cases were reported in which laparotomy was done, the diseased focus removed and recovery followed in all. These are the class of cases formerly regarded as cellulitis, and although most of them recover, it is by a long and tedious course, and many become invalids. A case was cited which lay for twelve weeks with fever, a tumor was present. This was five years ago, and an operation was not done. Recovery was tedious. An early operation would have saved much suffering, and the patient would be in better health now.

The rule in all cases of puerperal sepsis where fever continues and tumor is found, is to remove it by laparotomy. With proper precautions the mortality would be less than by the expectant plan and the recovery more rapid and complete.

The election of DR. WALKER, of Evansville, was an honor to him, to his city, and to the young men who supported him so faithfully. He is by many years the youngest man elected to the highest office in the power of the medical profession of Indiana to give. The young men feel it incumbent on themselves to see that the next year in the history of the Indiana State Medical Society be a memorable one, and that the meeting exceed all others. The indications are that the object undertaken will be accomplished. Dr. Walker's many friends over the State and in other States are covering him with congratulations.

OHIO STATE MEDICAL SOCIETY.

The Forty-second Annual Session was held at Sandusky, June 17-19, 1891.

DR. W. J. CONKLIN, of Dayton, Presided, and DR. J. A. CALLAMORE was Secretary.

DR. WILLIAM THOMAS CORLETT, of Cleveland, Ohio, read a paper entitled,

NOTES ON THE TREATMENT OF SYPHILIS, ITS EVOLUTION AND PRESENT STATUS.

The author went into the history of syphilis and its treatment from the time of Moses, through the centuries, to the present day. He finds that mercury in some form has had more ardent advocates than all other treatments. It is the only known drug which possesses any curative influence on the disease. The virus may be eliminated by the natural eliminative forces of the body in from one to thirty years, but under the use of mercury its manifestations become infrequent, and finally the organism becomes free from the morbid influence. Authorities differ as to when it is best to begin the use of mercury, but doubtless the best course is to begin as soon as the diagnosis of syphilis is made. The special form of mercury depends upon the individual case, but generally speaking the protosalts are preferred to the bisalts at the beginning—as calomel, mercury with chalk, the blue pill either alone or combined with

iron. A fertile source of error is the substituting of the iodine compounds for mercury. Good results will follow the mixed treatment, late in the course of the disease, of iodine and the protosalts of mercury. Iodine should be discontinued as soon as practicable, although mercury should be given at intervals for one or two years after all manifestations have disappeared.

The author has encountered three cases in young robust subjects over which mercury had no specific influence. The disease finally yielded to $\frac{1}{10}$ grain doses of the chloride of gold and sodium, taken from four to six times daily. As aids to the treatment, the use of tobacco should be avoided, and a special course of living best suited to regulate his physical welfare should govern the patient. The Hot Springs of Arkansas are much frequented by those who think to have the disease “boiled out” of them, but it is quite generally recognized by syphilographers that the waters have no specific effect on syphilis, and in some instances the best physicians there have advised against their use.

A CASE OF DROPSICAL DISTENTION OF DOUGLAS' CUL-DE-SAC

was reported by DR. J. F. BALDWIN, of Columbus. The distention was very great, producing a tumor that projected at the vulva as large as a coconut. It had existed for two years, and was a source of great annoyance and distress. On lying down, or on pressure, the contents, which consisted wholly of serum, would pass into the abdominal cavity, and the tumor would disappear. A tumor as large as an orange existed on each side of the womb, and it was supposed that the dropsical effusion was due to the pressure of these tumors on the veins of the broad ligaments. As the patient would not consent to the removal of these growths, a less radical operation was decided upon. An incision was made through the vaginal wall into the cavity of the sac, the contents allowed to escape, and the pelvic cavity explored by passing the finger through this incision. It was then ascertained that one of the tumors was a cyst of the broad ligament and the other a cyst of the ovary, with such adhesions that the opening between the general peritoneal cavity and Douglas' sac would barely admit the passage of the examining finger. It was decided to attempt to secure obliteration of the sac, and its inner surface was accordingly wiped over with a $\frac{1}{1000}$ solution of corrosive sublimate. A local peritonitis ensued, as was expected, and the result was a complete cure. So far as the operator could ascertain, the case was a unique one, and none of the members present could throw any light upon it.

TESTS FOR ALBUMEN

was the title of a paper read by DR. WILLIAM B. DAVIS, of Cincinnati. He said among the equipments required of the physician of to-day is that of making a thorough examination of the urine. In the United States albuminuria has been found to prevail in from 10 to 20 per cent. of all persons examined, in Great Britain and Europe larger percentages have been found; Prof. Grainger Stewart having demonstrated its presence in nearly one-third of the population. Prof. Senator, of Berlin, states in his recent work, that 41 out of every 100 healthy individuals, particularly soldiers, have albuminaria.

Of late years there has been a great multiplication of tests for the discovery of albumen in the urine. Posner's test, as published by Senator, in his late work is this: “Add to the filtered urine three times

its volume of alcohol or a concentrated aqueous solution of tannin, wash out the precipitate with water, and then dissolve with acetic acid, or add a large quantity of acetic acid to the urine, and then evaporate in order to concentrate the urine. In both cases in the acetic acid solution, all the tests for albumen which are not influenced by the acetic acid will give a positive result. There is no doubt that some of the tests recently introduced are useless, others misleading, and some are very difficult of application. In order that there may be uniformity in our investigations, there should be an agreement by chemists and the medical officers of life assurance companies upon certain tests for albumen in the urine which shall be recognized as standard.

DR. DAVIS here quoted a number of authorities who gave different tests for albumen, and from all the testimony he concluded that the familiar tests of heat and nitric acid were the most popular, the best and most reliable reagents for the detection of albumen in the urine.

Prof. Vaughan, of the University of Michigan, wrote him that he thought the only tests which distinguished the albumens from the albumoses and peptones, were the nitric acid and heat tests, the nitric acid contact test and acetic acid and potassium ferrocyanide test.

The author concludes, however, that the refinement of our chemical tests, and the fact that some of them give reactions with other proteid than serum albumen, do not account for the wide discrepancy between the American and Continental reports of the prevalence of albuminuria in persons otherwise healthy.

DR. J. C. REEVES, of Dayton, read a paper upon the

A. C. E. MIXTURE.

He found justification in further study of anæsthetics in the wide difference of opinion as to which is the best agent, and in the fact of accidents with both chloroform and ether. The origin of the A. C. E. was with Dr. Hailey, of London, and it was strongly recommended by the chloroform committee of the Royal Medico-Chirurgical Society of London in 1864. Since that year the author of the paper had used it with all sorts of patients, in all kinds of operations, almost exclusively as an anæsthetic except in obstetrics and for young children. Was the alcohol of the mixture of any value? This is answered decidedly in the affirmative upon chemical grounds, the union is a chemical combination, not a simple mixture. This annulled one of the most frequent objections to the mixture, viz.: the different rate of evaporation of the ingredients. Other objections were considered, and special attention given to the physiological experiments of Dr. A. B. Watson, which showed results adverse to the mixture. Accidents from the A. C. E. mixture were studied, there had been three deaths, and a number of cases in which dangerous symptoms were manifested, of the latter the author had met with three in his own practice, covering a period of twenty-six years, but the mixture was not presented as an absolutely safe anæsthetic, for such a thing does not exist. Finally, with a due appreciation of the insignificance of the value of any individual experience with anæsthetics, the author expresses his strong conviction of the advantages of the mixture as compared with either of the leading anæsthetics, its greater promptness, its lesser unpleasantness, and its greater safety as against chloroform.

DR. W. G. SCOTT, Cleveland, queried if persons affected with kidney trouble did not do badly under ether.

DR. McCURDY, of Youngstown, had used all the anæsthetic mixtures and had no accident. He likes to use the A. C. E., and has had more nearly fatal accidents from ether than anything else.

DR. R. HARVEY REED, of Mansfield, is afraid of chloroform every time he gives it, though he likes it every other way. He related his experiments on the lower animals and discussed apparatus.

DR. H. J. HERRICK, of Cleveland, said we have many varied conditions which all demand consideration. The patient and his condition on the mixture and the method of administration.

DR. X. C. SCOTT, Cleveland, said that "we have in A. C. E. two gases, one heavy and one light. We have no assurances of how much of each our patient is getting. I have abandoned all anæsthetics except chloroform. I always give whiskey some time before giving the anæsthetic."

DR. F. C. LARIMORE, of Mt. Vernon, believes in straight ether and straight chloroform. Children under ten, chloroform; over ten, ether. It is very important to have the confidence of the patient.

DR. S. S. THORN, Toledo. As for me and my house we will use the A. C. E. I never saw an evil effect from its use.

DR. J. H. BALDWIN, of Columbus, reported

A DEATH FROM CHLOROFORM,

which occurred after the cessation of the administration four minutes. She was inverted, artificial respiration was used, and the heart was stimulated by pricking it with a hypodermic needle. "I have used chloroform in most cases, but shall not use it as confidently as before. I have used the A. C. E. and shall use it in the future. I do not think children possess that immunity from chloroform as generally believed."

DR. T. A. REAMY, of Cincinnati, was surprised that gentlemen would use a mixture of anæsthetics and run the risk of both. "I gave chloroform for years in a large number of cases and never had a death. I never saw a death from chloroform, ether or A. C. E. I would give ether unless there is some trouble with the bronchial mucous membrane or other mucous membrane. I can put the patient profoundly under the influence of ether in four minutes. Why not give chloroform? It is not as safe as ether, that is all there is of it. Alcohol has the same effect as chloroform. I have found the effect of digitalis on the heart magical."

DR. J. C. REEVE, of Dayton, warned the gentlemen against the use of vitalized air which had been brought into the discussion. "It is nothing but chloroform diluted with air and perfumed. I have made careful clinical studies of every case which proved fatal since the use of anæsthetics. That children are safe against chloroform is a delusion and a snare. I do not believe that A. C. E. evaporates differently; ether first then the chloroform. We want further investigations. I have no faith in the action of digitalis in heart failure from chloroform, it is all right in theory but you cannot get its action in time."

Three cases showing

UNUSUAL DIFFICULTIES OF DIAGNOSING ABDOMINAL TUMORS

were reported by DR. T. A. REAMY, of Cincinnati. The cases were of very great interest, and were selected

from a large number on which the doctor had recently operated, which showed the great difficulty of accurately diagnosing abdominal tumors. He thought an injustice was frequently done doctors, who were previously in charge of cases operated on, the operator not finding the conditions present said to exist by the former physician in charge. These conditions are not always easy to determine accurately, and then, too, they sometimes change with changing years.

THE OPERATIVE TREATMENT OF UTERINE CANCER

was the subject of a paper by DR. D. TODD GILLIAM, of Columbus. He considered the two operations total extirpation and high amputation, favoring the latter.

SALPINGITIS, WITH REPORT OF TWO CASES,

was the title of a paper by DR. A. B. WALKER, of Canton. Two cases were reported. Operations were strictly aseptic, and no chemicals were used in the abdomen. He believes that the early treatment of endometritis would in many cases prevent the formation of salpingitis. Gonorrhœa in women becomes a matter of considerable importance in view of its sequences.

DR. EDWIN RICKETTS discussed the paper.

Papers were read by C. W. Tangeman, Cincinnati, on Convergent Squint and its Treatment; Dr. A. B. Thrasher, of Cincinnati, on Papilloma of the Larynx with case; Dr. C. N. Smith, of Toledo, Gonorrhœa in Women; Dr. A. B. Richardson, Cincinnati, Home vs. Hospital, Treatment of the Insane, Influenza; D. N. Kingsman, Columbus, Convergent Squint and its Cure; Dr. C. W. Tangeman, Cincinnati, The Value of Drainage in Cases of Bleeding after Laparotomy; Dr. M. Stamm, Fremont, Compound Ganglion, Treatment by Operation; C. S. Hamilton, Columbus, Hernia; Dudley P. Allen, Cleveland, and others.

The matter of contract railroad surgeons was brought up, referred from the American Medical Association, and referred to a committee of five. The resolution making the members of auxiliary societies, that is county and district societies, members of the State society, as Indiana and other States have done, very much improving their membership was, after some discussion, passed. The business of the society is to be done by the delegates, and all members who are now members are not to be affected by this change *i. e.*, deprived of the right of suffrage.

The Committee to get a Law Passed by the Legislature for the Protection of Physicians, reported that not liking the complexion of the present legislature they had not accomplished anything.

The President's address was on

MOLIERE AND THE DOCTORS,

and consisted of matter mostly historical, enumerating numerous sayings of Moliere concerning the doctors.

THE SURGICAL TREATMENT OF CHRONIC CATARRHAL APPENDICITIS

was ably discussed by DR. R. HARVEY REED, of Mansfield. He discussed the uses of the appendix and concluded

"Everything can something do,
But pray for what use are you?"

He then paid special attention to the diagnosis. The paper was discussed by Drs. Reed, Scott, Kinsman, Ricketts, Hall, Baldwin, and Jones.

WHAT CASES SHALL BE DRAINED AFTER ABDOMINAL SECTION,

was the subject of a paper by DR. R. B. HALL, of Cincinnati. The doctor had found considerable difference in opinions and in practice. So far as he was aware he was the only one who uses universal drainage which he does now in every one of his cases. He will continue to give his patients the benefit of the doubt by continuing to drain in every case in which the peritoneal cavity has been opened; he favors the small Price tube.

DR. EDWIN RICKETTS, of Cincinnati, corroborated DR. HALL, in the use of the drainage tube in every case, though sometimes he only uses it two hours; he uses Kieth's tube.

DR. R. H. REED spoke, favoring the tube.

The paper was further discussed by DR. S. S. THORNE, of Toledo, and the discussion closed by DR. HALL, who showed sample of tubes.

Three cases of the

RADICAL CURE OF HERNIA,

were reported by DR. F. C. LARIMORE, of Mt. Vernon. He had operated after Marcy's method. He showed the kangaroo suture. He believed the radical cure of strangulated hernia was just considered one of the triumphs of surgery.

The social features of the meeting included an excursion to Cedar Point, where a dinner, concert and the President's address awaited them. An excursion to Lakeside, Kelly's Island, and Put in Bay Island was also given.

The officers chosen for the ensuing year were: President, Dr. G. A. Collamore, Toledo; First Vice-President, Dr. X. C. Scott, Cleveland; Second Vice-President, Dr. A. J. Gawne, Sandusky; Third Vice-President, Dr. A. R. Baker, Cleveland; Fourth Vice-President, Dr. F. D. Bain, Kenton; Secretary, Dr. C. A. L. Fitzpatrick, Cincinnati; Assistant Secretary, Dr. August Rhu, Marion; Treasurer and Librarian, Dr. T. W. Jones, Columbus. The following members of committee were appointed for five years: Finance, H. J. Herrick, Cleveland; Legislation, Dr. D. J. Snyder, Columbus; Ethics, Dr. S. S. Thorn, Toledo; Publication, Dr. E. S. McKee, Cincinnati; Admissions, A. F. House, Cleveland.

A telegram of sympathy was sent Mrs. Dr. A. W. Ridenour, of Massillon, whose husband, an honored member of the Society, and whose name was on the programme, lay dangerously ill.

Cincinnati was chosen as the place of the next meeting, and the date as the first Tuesday in May, 1892.

CARCINOMA A FORM OF PERVERTED NUTRITION

was the subject of a paper by DR. H. J. HERRICK, of Cleveland. He thought that in our ideas of cancer we were in error, and that we had not made progress since the days of Hippocrates. He considered the new growth to exist in the white blood corpuscles. The great mistake we make is to treat only the visible disease and not the constitution.

DR. A. R. BAKER, Cleveland, read a bill on

SOME FACTS EVERY PRACTITIONER SHOULD KNOW ABOUT SQUINT.

Is the ambylopia of the squinting eye the cause or the effect of the squint? The weight of opinion seems to be that the theory of Donders is correct.

A fact that every practitioner should know is, that most cases can be cured without an operation by the

use of most carefully fitted spectacles. As a general rule, the nearer the correction of the error of refraction is attained the better. In order to do this accurately the accommodation should be paralyzed with atropia in every case. Spectacles should always be given in preference to nose glasses. Treatment based upon the facts that the squint is due to the error of refraction, that binocular vision can be restored, and that squint can be cured without an operation has met with the most gratifying results.

In treating cases of squint the author has usually been governed by the following rules:

1. If the squint is alternating, and the vision fairly equal in both eyes, it is seldom necessary to operate.

2. If the squint is fixed in one eye, but the vision of that eye is good, the same should be instilled into the working eye occasionally, and possibly a patch kept over it, and orthopedic exercises indulged in as described by Landolt.

3. If the squint is fixed in one eye, and the sight very defective, and no improvement after patient trial with lenses and covering good eye, only a cosmetic result can be obtained, the operation should be performed any time after the sixth year.

The Polyclinic.

PHILADELPHIA HOSPITAL.

PROF. LAPLACE presented a case on which Chopart's operation for amputation of the foot had been performed, followed by a chronic ulcer in the stump. He gave, as a possible reason for the failure of the wound to heal, that the plantar artery, contained in the long plantar flap, had been cut off too short. Further, he said, always an ulceration is the result of a disturbance in the circulation. In order to have a plentiful supply of blood to the parts, the long plantar flap would be cut by transfixion, leaving the plantar artery in its integrity out to the end of the flap.

Acute pleuro pneumonia of both sides, is said very often to be one of the early signs of tuberculosis.

—Cohen.

The treatment during typhoid fever relapse should be entirely antiseptic. The fever may be relieved by sponging or spraying, but the main effort of the physician should be to keep the bowels clean, and as pure as possible under the circumstances. Small doses of calomel may be used, and, what I prefer above all other drugs, salol, or salicylate of phenol (salicylic acid 60 parts, carbolic acid 40 parts). Salol may be given in v-gr. doses four times daily, watching out for suppression or discoloration of urine, which calls for its discontinuance. The French prefer beta-naphthol with salicylate of bismuth if there is diarrhoea; salicylate of magnesium with beta-naphthol if there is constipation.—Cohen.

When we have acute gastric catarrh, followed by jaundice, we are justified in calling it a case of gastro-hepatic catarrh, if the attack has not begun with severe pain in the region of the gall-bladder, characteristic of the passage of a stone.—Walker.

Dr. Walker says: I have a patient who has passed only one gall-stone, although he has had half a dozen or a dozen attacks of gall-stone or bilious colic in the last two years. When I first saw him he had an attack of bilious colic, and I told him he was passing a

gall-stone, but it could not be found on examination. He was put upon phosphate of sodium after the acute attack, and kept on that treatment for a whole year, during which time he had but one attack of colic, when the gall-stone seemed to have escaped, because the pain subsided suddenly, and he was well. In the last six months he has had three such attacks coming on suddenly and disappearing suddenly, and I supposed each time he had voided a gall-stone which had escaped examination. However, one day I went there during a severe attack, and found his wife exceedingly joyous at having gotten a gall-stone, mulberry-like in shape and appearance. It was a very large stone, about one-third inch long and one-eighth inch thick, and without any facets, showing it to be single. I have no doubt the repeated attacks were due to the attempts of this mass to enter the common duct, and being unable to do so, passing back into the gall-bladder. It was found, when voided, in the center of a clot of blood. He had been voiding blood for some days before the attack.

In children you will frequently find the mucous membrane of the prepuce adherent to the glans penis. In these cases it is very important to break up all the adhesions, as they are one of the causes of reflex trouble in childhood, not uncommonly of convulsions. When called to attend a child in convulsions, never fail to examine the penis to see whether you have elongated prepuce, constituting phimosis, and whether you have adhesions between the glands and foreskin, which may result in reflex manifestations in the shape of convulsions.—Deaver.

In using cocaine for circumcision, constrict the base of the penis with a rubber tube, as otherwise there is danger of introducing the cocaine directly into the circulation; you may have immediate absorption of the cocaine and manifestation of its toxic effect, which will annoy the patient and the surgeon as well.

—Deaver.

Bright's disease is not a disease of the kidneys in themselves, but is really a part of a very widespread arterial degeneration in which the diagnostic symptoms are present in the kidneys.—Hughes.

In threatened scarlatinal Bright's disease, where there is high tension, the Bright's disease can be averted by lowering the tension of the arterial system.

In cases of kidney disease, to reduce arterial tension, nitroglycerine is most commonly given, until the tension is reduced or until cerebral symptoms are produced. Nitrite of amyl or nitrite of sodium are good, also aconite.—Hughes.

THERE are advantages in living under a paternal government. The Austrian Minister of the Interior has recently issued an ordinance that the burgomasters of all communes must exercise strict supervision over the medical men practising within their jurisdiction in the matter of legibility of prescriptions. They are charged to see that every prescription is clearly and legibly written in all its parts, so that there may be no doubt as to the remedy, the dose, or the signature. If the average handwriting of Austrian medical practitioners is as cryptic in its character as that of many of their brethren in this country, it is to be feared that many worthy men in the upper, not less than in the lower, professional circles will have to go to school again till they have at least learnt to sign their own names, so that they can be read without the aid of divination.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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PETROLEUM PRODUCTS.

FIRST we had cosmoline; and what an improvement it was upon the preceding ointment bases. The rancid decomposing animal fats disappeared, and the new excipient—bland, inodorous, neutral, unchangeable—received the heartiest welcome. People “put on cosmoline” for about everything under the sun, using it literally for “corns and small-pox.” It cured the croup, burns, rheumatism, etc., etc.; made the hair grow again on bald heads; and altogether this waste product from the refining of coal oil assumed an importance only exceeded by the illuminant and lubricant constituents. Then came vaseline—an improvement on the first. It shared the field opened by the enterprise of the cosmoline people, with such satisfactory results that the Standard Oil Company, the reputed owners of “vaseline,” are said to have cleared a cool million out of it. But the introduction of petrolatum in the *U. S. Pharmacopœia* put an end to the monopolist profits of these corporations. When every retail druggist could supply his own coal-oil ointment bases, the market was closed to the sale of these products at fancy prices. The great manufacturers are probably able to supply the article to the retail druggist at a less cost than the latter can produce it, but the fact that he can produce it enables him to keep the price down close to the actual cost of production. This has resulted in a great saving to the community, out of the profits of these great and wealthy companies. Part of the saving has come out of the medical journals, for the advertisements of “cosmoline” have long since disappeared; and we have not seen those of “vaseline” for a long time, excepting in a homœopathic journal. And the beautiful displays of petroleum oils, shown at the medical society meetings, have simmered down until at the Reading meeting they were represented by a not overly clean boy, who distributed bits of brown paper

on which was printed a rather hysterical appeal to the physician to beware of petrolatum. The medical publisher would regretfully exclaim as he views the gaps in his advertising pages, “Gone to join the malt-extracts and the coca-wines,” were he not aware that his true interests lie with those of his readers, in the survival of the fittest, and the failure of the unfittest. For all that the most liberal expenditure of printer’s ink will do is simply to secure for an article a fair trial, for its ultimate success or failure it must rest upon its merits. This is why we are confident that the sulpho-carbolates will eventually win general recognition as the best antiseptics for the gastrointestinal canal; though their progress is at present delayed because no great manufacturing house is interested in pushing them. Were they patented, or manufactured solely by Merck of Darmstadt, and sold at ten times their cost, they would be known all over the land, and their virtues sung in the editorial pages of every medical journal—but one.

But, in our own opinion and in that of others, the Standard has retired from the field too soon. We have not as yet run out the possibilities of the petroleum products. Indeed, the development of the germ theory offers new opportunities to these valuable agents, as excipients or as true germicides. The remarkable power of petrolatum, in checking the extension of the catarrhal process, has had no plausible explanation except as a destroyer of suppositious microbes. This opens up a wide field for the application of this agent, in catarrhs of the internal mucous membranes as well as of those more accessible to local treatment. Furthermore, as an excipient for remedies administered subcutaneously, there is room for a large increase in the use of these petroleum products. We have already called attention to the ease with which large doses of creosote can be introduced by this avenue—very much larger than by the stomach. If the purified creosote described by Catillon be substituted for that ordinarily employed, and liquid petrolatum of the purest quality be utilized as the menstruum, it is probable that the saturation of the body with this agent can be secured very easily. And if gold and iodine really render the human body unsuitable to allow of the existence of living tubercle bacilli therein, we have much faith that creosote will do as much or more.

At the last meeting of the Philadelphia County Medical Society a number of samples of petroleum products were exhibited. One of these, termed glycoline or mineral glycerine, was the most perfect liquid petrolatum we have ever examined. The name is not well selected, as the properties and uses of this substance have no relations with those of glycerine. The great reduction in price above mentioned is shown by the fact that the petrolatum made by this company, as of “U. S. P. standard of color and quality,” is listed at six cents per pound in barrels; while fifty cents per pound was the usual price paid for cosmoline.

A MATERNITY HOSPITAL at Sitka is proposed. With a little education of the natives, such a hospital would not be needed.

Annotations.

WE are pleased to see the favorable attitude displayed by the Brooklyn press towards Dr. Mattison's project. Dr. Mattison has for years devoted himself to the treatment of narcotic habitués, with unusual success. He now endeavors to found an institution wherein those unfortunates, who have not the means to pay for treatment, may be accommodated. No better use could be made of funds devoted to charity. This class comprises men who could be, and should be, saved, and made valuable to the community. At present, the only asylums open to them are the House of Correction and the Alms-house, with their debasing influences and absence of all rational treatment. The importance of Dr. Mattison's project can be appreciated by no one as well as by members of the medical profession, some of whose brightest lights have been quenched in the gulf of narcotism. To the community at large, and especially to the legislator and philanthropist, we owe the duty of directing attention to this enterprise.

Letters to the Editor.

THE FIRST OBSTETRICAL CLINIC.

REFERRING to the letter from Dr. Lanphear, in THE TIMES AND REGISTER of June 13, relative to the First Midwifery Dispensary, I would state that having lived near Dr. Lanphear for several years, and knowing him personally, I am, like him, impressed with the idea that the Eastern schools can gather a point or two from Western brethren; but at the same time loyalty to my Alma Mater "Harvard Medical School" compels me to state that "way down East" in Boston, there is an institution for conferring medical knowledge which has been in existence one hundred and nine years, has done some pretty good work in the past and promises fairly well for the future. There are now eighteen professors, four assistant professors, nine instructors, one lecturer, four demonstrators, twelve assistants to chairs, one curator and sixteen special clinical instructors, making a total of sixty-five teachers. The classes attending are not as large as those of some other schools, partly on account of a foolish notion that is popular in that vicinity of requiring a tolerably high grade of general knowledge before admitting students to its advantages.

There are a number of hospitals in this staid Eastern city at which the students receive a great deal of personal clinical instruction facilitated by reason of the numerous instructors and few students. This institution is not quoted in the newspapers as much as some others, yet they have sufficient confidence in themselves at Harvard to meditate upon, and possibly have already decided upon requiring all students entering after September, 1892, to take a four years' course of *forty weeks* in each course preparatory to receiving the degree of M.D.

But the reference to Dr. Lanphear's letter was as to the "Obstetrical Dispensary."

Perhaps Harvard has no such dispensary, and Dr. Lanphear states that Dr. Berger originated this method in this country in 1889, but I was of the impression that Harvard had one. In 1884, it was an old story and excited no comment, that the McLean Street Lying-in Hospital was presided over by

the professor of obstetrics; that the two house officers were under-graduates, who had studied medicine at least two and a half years; that women were attended in confinement at the hospital, or at their homes, at any time of day or night; that every student was obliged to attend at least two cases of obstetrics under the direction of the professor or assistant professor of obstetrics during his third year and previous to graduation, and that from two to twenty students were at all hours available and employed by the house officers of the lying-in hospital and the physicians of the city dispensaries, assistants and principals.

It seems to me Harvard is about as well supplied in the matter of clinical material in the line of obstetrics as in other branches, having the obstetrical department of the city dispensary, and also the McLean Street Lying-in Hospital and its out-door service, both under the immediate supervision of the professor of obstetrics and his assistant. Whether or no Harvard was the *first* to have such a dispensary I cannot say, and have no idea, but no institution starting since 1884 can make any such claim.

Two years ago the requirements for graduation at Harvard were changed, and each student thereafter must attend at least six cases of confinement. In the obstetrical service of Harvard last year between six and seven hundred women were delivered by the class, one man alone attending forty-three cases.

The faculty do not think it profitable for students to attempt advanced work till they have laid a thorough foundation in anatomy, physiology, etc., etc., hence first and second year students are not assigned obstetrical work, but having a good foundation by means of recitations, laboratory work, dissecting and lectures, the third and fourth year men are abundantly occupied with clinical work. This is not stated to disparage Western work; the advances they are making are very gratifying, but they must put time and labor into medical education in the West, and look up statistics before despising the work of the effete East, or claiming to be in advance of it.

W. D. BIDWELL, M.D.

918 FOURTEENTH STREET, N. W., WASHINGTON, D. C.

SEA-SIDE PHYSIOLOGY.

BENECKE has demonstrated, that on sea-shores the cooling of warm liquids takes place more rapidly than it does within firm land, particularly in high latitudes, and consequently the loss of warmth of the body is here greater. Further, he has found that the tissue change on sea-shores is increased, manifesting itself in increasing of the amount of urea in the urine, and diminution of uric and phosphoric acids with a simultaneous increase of urine in specific gravity, and therefrom proved that a long continued sojourn on sea-shore is more profitable than the sea-bathing itself.

In most individuals, according to many observers, there is a slight decrease in the frequency of the breathing and pulsation, while their dwelling is on sea shores, comparatively with that when away from them. This phenomenon can probably be explained by the elevation of atmospheric pressure in connection with the increase of dampness.

The above stated loss of warmth of the body is followed by an increased appetite, therefore stimulates the taking in of food. Now, the ingesta surpass the exgesta and there is consequent accumulation of albumin, less fat. The increased process of oxidation within the organism tends to destroy the fatty

and adipose tissue, so much so indeed, that fatty individuals become less so while sojourning on sea-coast. So, then, the increased formation of blood, strengthening of the nervous system, and depending upon a quiet sleep, regular circulation and hardening of the skin, and at last, the acquired habituation of the organism to low temperatures, all these are the effects of a long-continued sojourn on sea-sides.

S. SEILIKOVITCH.

338 SPRUCE STREET.

CAN THE MENOPAUSE OCCUR DURING PREGNANCY?

BEING a constant reader of THE TIMES AND REGISTER, I, too, would like to ask a question (through the journal): A friend of mine is about to marry a widow lady, age forty-six, in perfect health, monthly periods regular. She has a child twenty years of age, and has never been pregnant since; been a widow eight years. The question is, if she marries and becomes pregnant, do menses cease, or, in plain terms, does a change of life occur during pregnancy, if so, what may be looked for? Am unable to find anything on this subject. If you will kindly give information, it will be appreciated.

L. S. THOMAS, M.D.

BEVERLY, N. J.

Book Notices.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Vol. III, Third Session, held at Atlanta, Ga., November 11, 12, and 13, 1890. Published by the Association, 1891.

The three days' meeting was a most prolific one, judging by the number and quality of the papers in the handsome volume before us. Thirty-one articles occupy its 438 pages. From the address of the President, G. J. Engelmann, on "The Health of the American Girl," that opens the book, to the remarkable case reported by A. B. Miles, of a gunshot wound of the abdomen, with three mesenteric and sixteen intestinal wounds, and recovery after laparotomy, all are of interest to the reader and creditable to Southern surgery. But one article is illustrated; that of Lydston on varicocele, published lately in this journal.

INSOMNIA AND ITS THERAPEUTICS. By A. W. MACFARLANE, M.D., Fellow of the Royal College of Physicians, Edinburgh; Fellow of the Royal Medical and Chirurgical Society of London; Examiner in Medical Jurisprudence in the University of Glasgow; Honorary Consulting Physician (late Physician) Kilmarnock Infirmary; Formerly Examiner in Medicine and Clinical Medicine in the University of Glasgow, etc., etc. (Reprinted from Wood's Medical and Surgical Monographs.) Octavo, 302 pages, muslin, \$1.75. New York, William Wood & Company.

The author takes up the physiology of sleep, then, after some general remarks upon insomnia, goes on to treat this condition as dependent upon affections of the nervous system, of the alimentary canal, of the liver, on gout, circulatory and respiratory affections, febrile and general diseases, urinary diseases, and insomnia peculiar to women; closing with a chapter on baths and electricity.

We cannot urge too strongly upon our readers the importance of this book; which ranks in practical value close to Hilton's on Rest and Pain. It lifts the reader to a plane above that of the empiric, and treats of insomnia in the only way it should be considered; from the physiological standpoint. How many men would be saved from narcotic inebriety were the principles here inculcated once implanted in the minds of physicians generally.

The Medical Digest.

COMBEMALE has tried cascarnine as a substitute for cascara sagrada, but finds the former too irritating for use.

LAVIELLE describes a medio-tarsal arthritis observed by him in velocipedists. The peroneus longus appears to be mainly concerned in its production.

HUGUIN calls attention to an early sign of whooping-cough, occurring during the catarrhal stage. This sign consists in photophobia, with dilatation of the pupils.

LOCAL ANÆSTHETIC.—

R.—Cocainæ hydrochlorat gr. v.
Antipyrine..... gr. xv.
Aquæ dest..... 3ss.

M.—S. Apply to gums of teeth to be extracted, etc.

—Stuver, *Journ. de Méd. de Brux.*

HYPODERMIC INJECTION OF CREASOTE FOR TUBERCULOSIS.—Josias (*La Méd. Moderne*) recommends the following formula:

Pure sterilized olive oil..... 8 cub. cent.
Cocaine, dissolved in oleic acid, q. s. 1 centigr.
Pure beech-wood creasote 1 gramme.

This is all injected at one séance, in four places; repeated every two days for a month; and resumed, after a pause more or less prolonged.

ENEMAS OF EGG ALBUMEN.—Huber has made some interesting experiments on the absorption of the white of egg from the rectum. If the egg be simply beaten up, with water, but little is absorbed. But if common salt be added, 15 grains for each egg, the quantity absorbed is doubled. Peptonized albumen is absorbed in quantity scarcely larger than that of this pure albumen. The salted albumen is absorbed in the proportion of 60 to 70 per cent., and, according to the same observer, does not cause albuminuria. The enema should be carried as high up into the bowel as possible. This may be repeated thrice daily; a cleansing enema having been administered one hour before each nutrient enema.

—*Revue de Thér.*

PURE CREASOTE.—Catillon fixes thus the characteristics that a good medicinal creasote should exhibit:

It should be colorless, even when long exposed to light in a bottle of white glass.

The odor should not recall bitumen in the least, and should disappear easily on washing with water. Its density should be 1,000 at 15°.

It should yield nothing to distillation below 200°, and should pass entirely between 200° and 212°.

Mingled with an equal quantity of pure glycerine at 90°, creasote should dissolve without difficulty or opaque, whitish tint; the solution should be as limpid as each constituent separately, and remain so when more of either is added. The addition of water precipitates creasote from this solution.

Creasote should dissolve in all proportions in alcohol, ether and the oils; its solubility in water is about 1 per cent.

Creasote should be absolutely neutral in tournesol. It should dissolve entirely in liquor potassa or soda, giving a very limpid solution, even after water has

been added. Mixed with an equal part of collodion, it should not coagulate, but give a perfect solution that preserves its fluidity. Dissolved in 10 parts of alcohol, and adding a solution of per-chloride of iron, 1 to 10, it should give a fine green color, clear, with no analogy to blue.

Mixing 1 cubic centimeter of creasote and 10 of a solution of caustic potash, 1 part to 5 of alcohol at 95°, a solid, crystalline mass should be obtained.

This purified creasote has an odor and taste much less sharp than ordinary creasote, and can be given in larger doses. Forty centigrammes dissolved in a spoonful of glycerine and diluted in a quart of water flavored with wine, can be taken without provoking any disagreeable consequences. Good hypodermic solutions are made by dissolving this creasote in oil of *horlogerie*, washed with strong alcohol, and heated to 150° to 200°. It is also well borne in enemata and in suppositories, even up to 15 grains.

—*Revue de Thér.*

PHENACETIN IN INFLUENZA.—I desire to draw the attention of the profession to the beneficial action of phenacetin during the first stage of influenza. Its action is prompt and striking, so that many patients declare they have derived more benefit from the "powders" than from anything else. It rapidly cures the headache which is such a distressing symptom at first, helps to reduce the temperature, and mitigates, but does not entirely remove, the aching of the limbs, a few doses of salicylate of sodium effecting its final removal. I give the phenacetin in 5-grain powders, repeated every four hours, till the headache and other pains cease. I have used phenacetin largely in a variety of conditions, and consider it is unrivalled as an analgesic. It seldom fails, it is comparatively cheap, tasteless, and, as far as I can see from a tolerably extended experience of it, is totally free from the unpleasant after-effects—depression of heart, etc.—sometimes caused by antipyrin and other drugs of its class. Insolubility is its sole drawback.—Henry, *Brit. Med. Jour.*

TREATMENT OF ACUTE RHEUMATISM BY HYPODERMIC INJECTIONS OF CARBOLIC ACID.—This procedure seems to merit some attention, for though it might appear somewhat heroic to inject into or close to acutely inflamed joints a strong solution of carbolic acid, yet the relief afforded was so great and welcome that the patients often begged for a repetition of the injection when another joint became painful. The short time that elapses between the injection and the cessation of pain, only half a minute in one case, the rapid return of freedom of movement, and the ease and ability to sleep thereby afforded, warrant our using it in many cases. It is of especial value in cases of gonorrhœal rheumatism, in which no good has arisen from the use of salicylates, but does not seem to act so well when many of the joints are affected.

Although I have injected the solution directly into the distended synovial cavity of an inflamed joint without untoward results, it is safer and as efficacious to pass the point of the needle of the syringe through the skin obliquely, and, judging where the synovial membrane is, to inject the fluid as close outside the sac as possible. Injected into the sac itself a ten per cent. solution of carbolic acid precipitates the albumen present in the serous contents.

The rationale of the rapid disappearance of all the symptoms is, first, that it is due to the powerful local anæsthetic action of the acid; secondly, to some slight specific action against the rheumatic poison

exerted by it. While with regard to the dose one might give, a grain of the pure acid in a child, two grains or two grains and a half in an adult, would not be excessive.—*Med. Press.*

TREATMENT OF ERYSIPELAS.—I think the plan of treatment which offers the best results is about as follows:

1. Internally, such symptomatic treatment as the nature of the case seems to require. Antipyretics only in case of high or persistent fever (over 103½° to 104°). Then antipyrine in dose of at least gr. xv–xx, for an adult, guarded by alcohol. Cooling drinks. Calomel or saline aperients in full dose if constipated. If much weakness, alcoholic drinks given freely, especially at critical periods, and iron or iron and quinine; digitalis if much fever and prostration; bromides for delirium; antipyrine or phenacetin for headache, with cold applications to head and as concentrated and nutritious a diet as possible.

2. Locally, I would paint the patch and surrounding margin of healthy skin thickly with ichthylol in collodion, 3j–3ij to 3j. If the scalp is the region affected, a watery solution of ointment of ichthylol can be employed. To arrest the spread I should in every case make an attempt either with the band of adhesive plaster or by scarification, or both, the latter to follow the former, in case the disease spreads beyond the adhesive strips. In erysipelas of the face which had not yet reached the forehead, or at least its upper part, I would apply a band tightly about the forehead and just above the ears, cutting the hair in a strip around if necessary to secure firm pressure. The chances of arresting the process here should be at least equal to those of checking the spread upon the extremity, for we have a hard bony base over which to make our compression. If the boundary is passed, then I should at once have the scalp shaved and apply another band higher up. The hair should be cut in any case in which the scalp is invaded or threatened. Then the same application of ichthylol in collodion can be made, as to the face or other part. If there be much tension, swelling, heat, and discomfort (which is not apt to be the case under collodion), any oily substance can be applied over it.—Allen, *Am. Jour. Med. Sci.*

[Such recitals as the above never fail to inspire us with the deepest pity for the unfortunate man who is compelled to treat erysipelas, and yet is ignorant of the control exerted over this disease by pilocarpus.]

TREATMENT OF CHRONIC ECZEMA BY CREOLIN.—At the Royal Academy of Medicine in Ireland, Dr. Patteson read a note on the treatment of chronic eczema by creolin. He had been led to adopt its use from the well-known value of tarry preparations in certain forms of eczema and psoriasis, and from its cheapness, which rendered it suitable for out-patient practice. He briefly referred to two cases of pustular eczema of the scalp—one of eight and the other of three years' standing—in which marked improvement and cure followed its prolonged use. It was applied as a wash or lotion in the proportion of 1 drachm to 8 ounces of water. The value of such a powerful germicide in these cases seemed in favor of Nuna's contention as to the parasitic nature of eczema.

Dr. Walter Smith expressed his concurrence with Dr. Patteson's views as to the utility of creolin as a germicide and stimulant. Creolin, although devoid of ordinary phenol, is a mixture of phenolic com-

pounds and other aromatic bodies, and possesses the advantage of ready miscibility with water, and of being unirritating.

Dr. Doyle said that he could corroborate Dr. Patten's remarks as regards the curative effect of creolin in subacute cases of pustular eczema, having used it by means of wet packs frequently repeated.

Dr. R. Montgomery said that creolin is supposed to be naphthalene combined with carbolic acid and an alkali, but he was unable to obtain more accurate observation as to its chemical constitution.

The President congratulated the Academy on the additional remedy for chronic eczema which Dr. Patten had brought under their notice. His communication, however, did more, and that was, that it emphasized the importance of steady perseverance in the treatment for eczema which had been found temporarily useful. If any exception could be taken to the paper it was in the direction (1) that the treatment was used for but one variety of chronic eczema—viz., the pustular; and (2) that creolin was not the only remedy employed.—*Med. Press and Circ.*

TREATMENT OF SARCOMA BY PYOKTANIN.—I wish to draw the attention of the profession to the use of pyoktanin in the treatment of sarcomata. Some few weeks ago Prof. von Mosetig, of Vienna, cited a few cases that had been treated with success by hypodermic medication. Recently I have had a patient with a large ulcerating sarcoma of the breast, sixty-three years of age, and unmarried. I first injected $\frac{1}{6}$ of a grain hypodermically into the mass. I also dressed the breast with a saturated solution on lint, and let it remain for forty-eight hours; the pain was less, the patient more comfortable, and on removing the dressing I found a more healthy surface. I then administered a 3-grain tabloid by the mouth. Unfortunately, the patient vomited, and, seeing the peculiar color, refused to take any more, so I was forced to content myself with dressing the breast as described. I have since thickly dusted the pyoktanin powder over the breast. My patient being worn out by the long-continued drain on the system, and of a very eccentric disposition, there has been great difficulty in carrying out this plan of treatment with sufficient accuracy to obtain the best results. I have certainly obtained a diminution in the size of the tumor, which has assumed a more healthy appearance. From these results it may be fairly assumed that as the sarcomata spread along the planes of cellular tissue the cellular growth is arrested, and it is within reason that cases of carcinoma might be benefited by this treatment. In cases where patients will not submit to operative measures, as well as in those that do not admit of surgical interference, and these are many, the early use of pyoktanin hypodermically would be of great benefit in diminishing the cell growth, and so causing a shrivelling of the tumor. My object in writing is the hope that some hospital surgeon might be induced to try the pyoktanin, and give the profession his clinical experience. The dose of pyoktanin is from 3 to 10 grains three times a day.

Heslop, in *The Lancet*.

FOR FACIAL ERYSIPELAS:

R.—Tinct. benzoini comp. ʒij.
Collodion flexil. ʒj.
Glycerine ʒj.

M.—S. For local use.

—Allen, *Am. Jour. Med. Sci.*

CHLOROFORM OR ETHER?—There are two distinct methods of chloroform administration in vogue. In one the pulse, as well as the respiration, is taken as a guide; in the other the pulse is never under any circumstances taken as a guide; and it is manifestly unreasonable to compare the risks of ether and chloroform without stating with regard to chloroform which of these methods is employed. The importance of this point lies in the fact that there is not one case of death from chloroform recorded, in which it is proved that the pulse was not taken as a guide; whereas, in Syme's practice, and in my own, where the pulse has never been taken as a guide, no death from chloroform has ever occurred. It should be stated that in Syme's practice, as in my own, the anæsthetic was always administered by students and not by specialists. If the pulse is affected under chloroform, it indicates chloroform poisoning either direct or through abnormal respiration. All the chloroformist has to produce is harmless anæsthesia, with regular breathing, and without poisoning, and of this the pulse can never be any test whatever; it is, therefore, positively dangerous and useless to take it as a guide. The following table places the available figures in a most striking light:

MORTALITY STATISTICS OF CHLOROFORM AND ETHER.

Anæsthetic Employed.	Source of Statistics.	Period.	Number of Deaths to Administration.
Chloroform..	Julliard.....	Not stated.	1 to 3,258
Ether.....	Julliard.....	"	1 to 14,987
Chloroform ..	St. Bartholomew's Hospital (Roger Williams)	10 years, 1878 to 1887.	1 to 1,236
Ether.....	St. Bartholomew's Hospital (Roger Williams)	10 years, 1878 to 1887.	1 to 2,754
Chloroform ..	Syme and Lawrie.....	43 years.	No death.

If statistics are of any value, this table ought to carry conviction with it, because it shows clearly that chloroform administered on Syme's principles is even less dangerous than ether administered in accordance with the most approved methods. But the Hyderabad Commission has no desire to institute further comparisons between them. All we say is, let anybody use ether who chooses, but if chloroform is to be employed, let it be given in the right way. Surgery cannot yet do without chloroform, and the only way to give it with invariable safety is to be guided, as Syme was, not by the circulation, but entirely by the respiration. What Dr. Julliard says about ether I can say, *mutatis mutandis*, about chloroform. During fourteen out of the seventeen months that have elapsed since the Hyderabad Commission demonstrated that the key to the safe administration of chloroform consists in regular breathing, I have given chloroform several times daily. Not only have I not had any deaths, but I have met with no accident of any kind. I have not once had to do artificial respiration or to pull forward the tongue. Neither have I had to interrupt an operation in order to ward off any accident due to chloroformization. There is no element whatever either of luck or of chance about these results. Any surgeon can administer chloroform without risk who will take the trouble to assure himself that the patient's breathing is normal and regular throughout the administration, and to stop the inhalation in good time, that is, directly full anæsthesia is produced. Statistics, such as those of Dr. Julliard and Mr. Roger Williams, which are intended to show the danger of chloroform, are, as my table

proves, susceptible of a very different interpretation. If they help to prove anything, it is that no anæsthetic is absolutely safe except chloroform administered on Syme's principles, and the more proof we have of this kind the better.

—Surgeon-Major Lawrie, *Brit. Med. Jour.*

FRENCH NOTES.

A. E. ROUSSEL, M.D.

ALBUMINURIA (M. Gaube).—Albuminuria is characterized by the presence of a minimum quantity of albumen in the urine, associated with the carbonates and principally with the earthly phosphates.

Albuminuria is physiological, pathological, or experimental.

Physiological albuminuria accompanies pregnancy, follows sexual intercourse, in both sexes, the menses in women, too rapid growth, etc. It is only a temporary condition.

Pathological albuminuria is associated with great suppurations, with a special alteration of the nervous cells. It is of long duration and grave prognosis.

Experimental albuminuria is the result of the ingestion of an excess of soluble phosphates, which excess is eliminated by the kidneys as an albuminophosphate.

—*La Tribune Médicale.*

TREATMENT OF YELLOW FEVER BY MEANS OF A LOW TEMPERATURE.—Garcia, of Santiago, treats yellow fever by reducing the temperature of the body by means of an apartment with double walls (*chambre polaire*), when by the introduction of ice the temperature is reduced to 10° and 0°.

Only two deaths occurred out of twenty patients treated in this manner.—*Journal de Médecine.*

AGARICINIC ACID (Dr. Combemale).—Agaricinic acid is an anti-sudorific agent of positive merit, which prevents the sweats, not only of pulmonary tuberculosis, but of all other intoxications or infections. In pulmonary tuberculosis it succeeds particularly well in the second and third stages of the malady.

Doses of from 2 to 4 centigrammes are sufficient to produce these effects.

If there is no pre-existing trouble of the gastrointestinal canal, the use of this remedy is never followed by any bad results.

—*Bulletin de Thérapeutique.*

EXALGINE IN INFANTILE THERAPEUTICS (Dr. Moncorvo).—1. The extreme activity of action of exalgine has been without exception well demonstrated in twenty-one children, from one to twelve years of age, to whom it was administered for various painful affections.

2. In all the cases the medicament has without exception been well treated.

3. None of the accidents sometimes observed in adults submitted to the usage of this drug (giddiness, etc.) has ever been noticed in my young patients.

4. Exalgine in these cases was first given in doses of 5 centigrammes a day, and progressively increased until it reached 30 centigrammes.

5. Possessing a very acceptable flavor, exalgine may be administered directly on the tongue, or in capsules; or it may be given in alcohol or water.

6. Other things being equal, exalgine surpasses in activity antipyrine, and apparently in one-fifth of the dose of the latter medicament.

—*Bulletin de Thérapeutique.*

Medical News and Miscellany.

A CASE is reported of carbolic acid poisoning from the use of carbolized oil, 1 in 40, by inunction.

DR. DEMARS, of Hallock, Minn., has tapped a patient sixty-six times, withdrawing from her abdomen over six hundred and fifty gallons of fluid, since 1884. The lady is sixty-eight years old, and said to be in better health than she was four years ago.

THE development of new capabilities to meet new conditions is well illustrated by the asserted fact, that since the use of wire netting for fences in Australia, the rabbits have developed a new nail that enables them to climb the fences with neatness and despatch; while a similar newly-developed appendage allows the animal to burrow under the netting, unless it is buried at least eight inches under the surface of the ground.

MEDICAL PRACTICE IN BRAZIL.—Since the beginning of the present year all European or other foreign medical men wishing to practise their profession in any part of Brazil are compelled to pass the Brazilian "State examination." Titular or honorary members of foreign learned bodies are, however, exempt from this formality. This saving clause would appear to open the door sufficiently wide for most respectable practitioners. It would be interesting, however, to know exactly what is included in the term "foreign learned bodies."

INSPECTED THE LINNÆAN HOSPITAL.—In response to a special invitation a number of prominent Chicago physicians and others assembled at the Linnæan hospital, 1619 Diversey avenue. The purpose of the visit was to inspect the hospital building and grounds. This hospital was originally known as the Chicago Maternity Home and was located on Huron street. Recently it was considered desirable to secure more commodious premises and the present location was secured. The building is a five-story structure, and its appointments are in accordance with the most improve medical practice.

—*Chicago News.*

THE American Association of Obstetricians and Gynecologists will hold its fourth annual meeting, at the New York Academy of Medicine, 17 West Forty-third street, in the City of New York, Thursday, Friday and Saturday, September 17, 18, and 19, 1891, under the presidency of Dr. Adam H. Wright, of Toronto. All physicians interested in the discussion of subjects pertaining to abdominal surgery, obstetrics, and gynecology are invited to attend without further formal notice. By order of the Executive Council.

WILLIAM WARREN POTTER, M.D., *Secretary.*

MEDICAL AND DENTAL COMMENCEMENT, Central University, Louisville. The commencement exercises of the Central University, of Louisville, took place June 17. The degree D.D.S. was conferred upon twenty-six students by the Louisville College of Dentistry, and the degree of M.D. upon fifty students by the Hospital College of Medicine. The Medical College has increased the standard required for graduation; the College term of five months being lengthened to six months. The commencement exercises were followed by a banquet given by the Alumni in honor of Dr. D. G. Murrell.

AT the Medico-Chirurgical College, of Philadelphia, Prof. E. Laplace has been elected to the chair of Surgery; J. M. Anders, to that of Practice of Medicine; and E. E. Montgomery, to that of Obstetrics. Thus, each of the vacancies in the great didactic chairs has been filled by men already members of the Faculty. Prof. Geo. E. Stubbs will probably resign the chair of Surgical Pathology, leaving only Prof. Gerhard to represent the Faculty that created this college ten years ago.

THE first annual meeting of the United States Medical Practitioner's Protective Alliance was held at Baltimore, June 11 and 12. The Society was incorporated under the laws of Maryland. Officers for the ensuing year were elected, and such other business transacted as was necessary to establish the Alliance on a basis of permanence. As usual in meetings for organization, comparatively little work could be done outside the regular routine in such cases. Addresses were delivered by the officers, and several papers on Alliance work in general were read and discussed. The proceedings will be published in a few weeks.

THE medical department of Tulane University was made, June 13, the recipient of a generous donation from Mrs. Richardson, wife of that eminent physician and dean of the college, Dr. T. G. Richardson, of \$100,000. The entire donation is intended to be used in erecting a new college on Canal street, between Vilere and Robertson, the site for which was bought a few days ago for \$35,000 by the Educational Board.

The faculty of the medical department of the university has selected Dr. Edmond Souchon, Professor of Anatomy and Clinical Surgery, as the representative of the faculty in the selection of the proper sort of building for the purpose intended. Dr. Souchon will leave in a few weeks for the North and East, to examine various colleges to guide him in the selection of a building that will be best suited to the wants of the local institution.

A NOBLE PROJECT.—Rich people, people in moderate circumstances, or people who have at times some difficulty in making "both ends meet," could not make a better use of their money, if they are moved to spend any of it, however small the amount, for benevolent purposes, than to contribute toward the endowment fund of \$60,000 for the Habitues' Home, which Dr. Mattison is about to establish in this city. The project is a noble one, indeed. Some of our most distinguished citizens—distinguished for their public spirit and high standing in the community—are interested in the great work which Dr. Mattison proposes to undertake. A splendid building, to cost \$100,000, is to be erected for the treatment of victims of the opium, chloral, and cocaine habits. The friends of those who are able to pay for their treatment will do so, and the endowment fund of \$60,000 is to provide for the treatment of patients who cannot afford to pay. Between the private patients, however, and those who will be paid for out of the endowment fund no distinction will be made. The fact that they are public patients will be known only to the Director of the Home and the friends of the patients.

In the hurry, rush, and nervous strain that is the outcome of the complex civilization of to-day, many nervous systems are shattered to an extent that makes treatment by the use of the drugs named a necessity.—*Brooklyn Standard-Union*.

WEEKLY Report of Interments in Philadelphia,
from June 20 to June 27, 1891:

CAUSES OF DEATH.			CAUSES OF DEATH.		
	Adults.	Minors.		Adults.	Minors.
Abscess.....	4	1	Gangrene.....	2	
Alcoholism.....	1		Inanition.....		17
Apoplexy.....	9		Inflammation brain.....	2	10
Bright's disease.....	12	2	“ brouchi.....	1	2
Cancer.....	7		“ kidneys.....	3	3
Casualties.....	8	1	“ liver.....	1	1
Congestion of the brain.....		10	“ lungs.....	8	5
Child birth.....	2		“ heart.....	2	
Cholera infantum.....	1	68	“ peritoneum.....	5	
Cirrhosis of the liver.....			“ s. & bowels.....	9	9
Consumption of the lungs.....	32	7	Jaundice.....	1	
“ bowels.....	1		Marasmus.....	1	24
Convulsions.....	26		Necrosis of tibia.....	1	
“ puerperal.....	2		Neuralgia.....	1	
Croup.....		5	Obstruction of the bowels.....	1	
Cyanosis.....		5	Old age.....	6	
Debility.....	1	5	Purpura hemorrhagica.....		1
Diabetes.....	1		Paralysis.....	9	1
Diarrhœa.....	1	2	Rheumatism.....	1	
Diphtheria.....		11	Septicæmia.....	1	2
Disease of the kidneys.....			Softening of the brain.....	1	
“ “ heart.....	12	5	Surgical operation.....	1	
Drowned.....	2	2	Sunstroke.....	3	
Dropsy.....	2		Teething.....		6
Dysentery.....	2	2	Tetanus.....	2	
Effusion of the brain.....	1		Tumor.....	3	1
Erysipelas.....	3		Uræmia.....	5	
Enlargement of the spleen.....	1		Whooping cough.....		1
“ “ heart.....	1		Wound, gunshot.....		1
Fever, scarlet.....		1			
Fever, typhoid.....	10	5	Total.....	185	245
Gaul stone.....	1				

THE PROPOSED PAN-AMERICAN MEDICAL CONGRESS.—It is contemplated to hold this meeting during the World's Fair, and from its success we may look for many important considerations, such, indeed, as a representative body of this nature may pertinently and wisely sit upon.

The untold advantages for personal improvement and a knowledge of the great advances made in all branches of the science of medicine. This will come from the exhibitions, from study, from contact with others, and from the proximate seats of learning which may be easily visited.

The teaching of the period, aside from the results already attained, and upon which the great future progress is to rest. Methods of medical teaching will be particularly interesting to foreigners, and of our own older practitioners who have been many secluded for years by the constraints of a rural constituency.

The scope, usefulness, and grand possibilities of the American Medical Association. A duty and an opportunity obviously rests here, which in due time will no doubt be developed and formulated.

The contact with fellow laborers from every clime, and the mutual good which follows the free interchange of views and experiences. This communion of thought is the bulwark of our science, and its strengthening, upon this occasion of the World's Fair, will not be without happy results.

—*Jour. Amer. Med. Asso.*

THE dose or quantity of gluside as a sweetening agent is $\frac{1}{300}$ of sugar. The "lump" of sugar of the familiar sugar basin weighs from 150 to 300 grains. The equivalent quantity of gluside clearly will be $\frac{1}{2}$ to 1 grain. One of the largest of ordinary lumps of sugar is not more sweet than a quarter of a grain of gluside; one of the smallest of ordinary lumps would communicate no more sweetness than an eighth of a grain of gluside. The dose of gluside as a medicinal agent must necessarily vary considerably; 5, 10, 15, 20 grains may be administered; 50 and even 80 grains have been given daily without any injurious effect on the system generally.

One grain of gluside will fully sweeten a 6-ounce bottleful of medicine, or $1\frac{1}{2}$ grain an 8-ounce bottleful, giving sweetness equal to that produced by $\frac{3}{4}$ ounce of ordinary syrup. The gluside is readily dissolved in these proportions—indeed, 2 grains of gluside may be dissolved, by careful management, in a single ounce of water. Where sweeter fluids are desired, soluble gluside, which is extremely readily soluble in water, should be employed. Gluside is soluble in solution of bicarbonate of sodium with evolution of carbonic acid gas. The latter solution, when warmed and made neutral and evaporated to dryness, yields "soluble gluside" or "soluble saccharin," which is very soluble in water, 100 parts of gluside yielding nearly 113 of neutral "soluble gluside."

THE INTER-CONTINENTAL AMERICAN MEDICAL CONGRESS.—At the meeting of the American Medical Association, held at Washington, May 5, 1891, Dr. Charles A. L. Reed, of Cincinnati, introduced the following:

Resolved, That the American Medical Association hereby extends a cordial invitation to the medical profession of the western hemisphere, to assemble in the United States in an Inter-Continental American Medical Congress.

Resolved, That the committee on nominations be and is hereby instructed to nominate one member for each State and Territory, and one each from the army, navy, and marine hospital service, who shall constitute a committee, which is hereby instructed to effect a permanent organization of the proposed Inter-Continental American Medical Congress, and to determine the time and place at which the same shall be held.

The resolutions were seconded by Dr. Wm. H. Pancoast and others, and unanimously adopted.

Pursuant to the foregoing the following committee was nominated and elected:

Ala.—R. F. Saunders, M.D.
 Ariz.—Henry A. Hughes, M.D.
 Ark.—Ed. Bentley, M.D.
 Cal.—W. R. Cluness, M.D.
 Colo.—Wm. A. Campbell, M.D.
 Conn.—C. A. Lindsley, M.D.
 Del.—C. H. Richards, M.D.
 D. C.—D. W. Prentiss, M.D.
 Fla.—C. R. Oglesby, M.D.
 Ga.—J. McFadden Gaston, M.D.
 Idaho.—Geo. P. Haley, M.D.
 Ill.—N. S. Davis, M.D.
 Ind.—A. M. Owen, M.D.
 Iowa.—B. H. Criley, M.D.
 Kan.—J. E. Minney, M.D.
 Ky.—J. N. McCormick, M.D.
 La.—Stanford E. Chaille, M.D.
 Maine.—Hampton E. Hill, M.D.
 Md.—Geo. H. Rohe, M.D.
 Mass.—Augustus P. Clarke, M.D.
 Mich.—C. Henri Leonard, M.D.
 Minn.—P. H. Millard, M.D.
 Miss.—W. F. Kendell, M.D.
 Mo.—I. N. Love, M.D.
 Mont.—Thos. J. Murray, M.D.
 Neb.—R. C. Moore, M.D.

Nev.—P. J. Aiken, M.D.
 N. H.—Irving A. Watson, M.D.
 N. J.—E. J. Marsh, M.D.
 New Mex.—C. E. Winslow, M.D.
 N. Y.—John Cronyn, M.D.
 N. C.—H. Longstreet Taylor, M.D.
 N. D.—E. M. Darrow, M.D.
 Ohio.—Charles A. L. Reed, M.D.
 Oregon.—Wm. Boys, M.D.
 Pa.—Wm. Pepper, M.D.
 R. I.—Geo. L. Collins, M.D.
 S. C.—R. A. Kinloch, M.D.
 S. D.—J. W. Freeman, M.D.
 Tenn.—J. R. Buist, M.D.
 Tex.—J. W. Carhart, M.D.
 Utah.—F. S. Bascom, M.D.
 Vt.—H. H. Holton, M.D.
 Va.—J. S. Wellford, M.D.
 Wash.—J. M. Morgan, M.D.
 W. Va.—J. H. Brownfield, M.D.
 Wis.—J. T. Reeve, M.D.
 Wyo.—J. H. Finfrock, M.D.
 U. S. A.—
 U. S. N.—A. L. Gihon, M.D.
 U. S. M. H. S.—J. B. Hamilton, M.D.

The committee appointed by the American Medical Association to effect a permanent organization of the Inter-Continental American Medical Congress, met at "The Arlington," Washington, May 7, 1891. The following officers were elected: Charles A. L. Reed, M.D., Cincinnati, O., Chairman; J. W. Carhart, M.D., Lampasas, Texas, Secretary; I. N. Love, M.D., St. Louis, Mo., Treasurer.

On motion, the officers were appointed a special committee to draft a constitution, and report the same at an adjourned meeting of the general committee, to be held at St. Louis, Mo., Wednesday, October 14, 1891, when the time and place of meeting of the Congress will be decided, and permanent officers be elected.

FREEZING MIXTURES.—The following selection of mixtures causing various degrees of cold, the starting point of the cooling being indicated in the first column, will probably serve many purposes. It should be stated that the amount of depression in

temperature will practically be the same, even if the temperature to start from is higher. Of course, in the case of snow it cannot be higher than 0° C. (32° F.). But in some cases it is necessary to start at a temperature below 0° C. For instance, the temperature of 49° C. may be reached by mixing 1 part snow with $\frac{1}{3}$ part of dilute nitric acid. But then the snow must have the temperature 23° C. If it were only at 0° C. the depression would be only about 26° C.

SUBSTANCE TO BE MIXED IN PARTS BY WEIGHT.	THE TEMPERATURE SINKS	
	FROM	TO
1. Water..... I	+ 10° C.	— 15.5° C.
Ammonium Nitrate.... I		
2. Dil. Hydrochl. Acid.... 10		
Sodium Sulphate..... 16	+ 10	— 17.8
3. Dil. Hydrochl. Acid.... I		
Sodium Sulphate..... $1\frac{1}{2}$	+ 10	— 16
4. Snow..... I		
Sulphuric Acid..... 4	+ 0	— 32.5
Water..... I		
5. Snow... I		
Dil. Sulphuric Acid.... I	— 7	— 51
6. Snow..... I		
Dil. Nitric Acid..... $\frac{1}{2}$	— 23	— 49
7. Snow..... I		
Sodium Chloride..... I	0	— 17.8
8. Snow..... I		
Calcium Chloride..... 1.3	0	— 49
9. Snow..... I		
Hydrochloric Acid.... 0.625	0	— 33
10. Snow..... I		
Sodium Chloride..... 0.4	0	— 24
Ammon. Chloride..... 0.2		
11. Snow..... I	0	— 31
Sodium Chloride..... 0.416		
Ammon. Nitrate..... 0.416		

—The New Idea.

OFFICE RULES FOR GENTLEMEN.—Rule 1.—Be sure and spit on the floor; that is what we have it for, and be very careful and get plenty of juice around the stove legs. The owner has nothing else to do but clean up.

Rule 2.—Be sure to light your pipe if you see a lady coming or after she comes in the office, and as you move try and get close to her, so you can give her a good second-handed smoke, easy to her, and without effort on your part. The ladies will enjoy this, especially if it is seasoned with lots of profanity and a good strong pipe. They also enjoy dead tobacco smoke in an operating room, especially if it is necessary to use ether or chloroform.

Rule 3.—Always be sure to turn to the doctor after a lady leaves his consulting room and say, "Doctor, that woman is a clipper. I wish I were a doctor, I tell you!" Also be quite sure to ask him, "if there isn't something wrong in the Danish coast?" Doctors have nothing else to do but answer those questions, and it is their place to keep the public posted, and, of course, ladies who have a little "inside history" that they want the world to know, go to the doctor's office for that purpose.

Rule 4.—If you come in the office and find the doctor very busy ask him to wait on you right away, convey to the other patients that you have an under clinch on that doctor, and he must obey forthwith. If any instruments are out of the case be sure to ask what they are and handle them all over at least twice. It does the doctor's soul good to go all over and disinfect them after you, besides it gives him practice in that line, and practice makes perfect.

—Kansas Med. Jour.

The Times and Register.

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THE HYPODERMIC INJECTION OF THE SERUM OF DOG'S BLOOD AS A CURE FOR PULMONARY TUBERCULOSIS.¹

By PROF. M. SEMMOLA.

HONORED COLLEAGUES:—The object of this paper is to place before the Academy a report upon some recent experiments in therapeutics that have been undertaken in my clinic, to the end of curing pulmonary tuberculosis by the method first tried by Profs. Richet and Hericourt, of Paris, and later employed by Verneuil, Depine, Bertin, Bernheim, Picq, and others. I commenced these experiments about the first of last February, within a few weeks after the announcement made by Richet, and I believe that I am the first and the only one in Italy, who, within the past four months, has initiated any similar work.

It would be superfluous to say that from the ten clinical cases that I have followed, that I mean to pose more or less enthusiastically in favor of the new method, since my natural reserve and skepticism in all therapeutic conclusions are well known. For the present, therefore, I confine myself to noting observed results, not even asserting that they are certainly true.

I confess that I met the first announcement of the experiments of Richet and Hericourt with a feeling of doubt; for I am thoroughly convinced that great caution is necessary in applying the easy results of laboratory work to the human system. Nevertheless, the base which had served these distinguished gentlemen as a starting point seemed more simple and logical than

usual; for this time they had taken a natural product like that of vaccine, serum sanguinis, rather than anything prepared by laboratory skill; and the latter, in my opinion, can never contend with that which nature herself provides. Without producing any apparent derangement of function, they had succeeded in partly arresting experimental tuberculosis in rabbits by injecting in these animals blood serum or pure blood taken from dogs or goats, which are known to be refractory to tuberculosis, at the same time or a little after the inoculation of Koch's bacillus.

I did not believe that I should be able to cure pulmonary tuberculosis by this method, but it seemed to me that I could thus take a long step in making a definite solution of this great therapeutical problem more probable, as we shall see later.

Just here I wish to say that this process is analogous to that taught by Behring and Kitasato, wherein they produced immunity to tetanus and diphtheria in animals by transmission to them of the natural qualities of some other animal known to be refractory to those diseases. They employed hypodermic or intra-venous injections of sterilized blood serum, actually practising transfusion. It is well-known that experiments of this class have been frequently made by accurate observers who have had the same idea in view; for example, that of the staphylococcus pyosepticus and pyocyanicus (see work of Biccoli of virus tetanicus and of tuberculosis.)

To explain these facts it becomes necessary to enter the field of hypothesis, and among the many different theories it is difficult to determine to whom belongs the merit of coming nearest the truth.

But if we fix our attention on the nature of the vaccine of Jenner, the laboratory experiments in tabes of Rowley and others, and above all the possibility of increasing immunity to any virus by preventive injections of blood of refractory animals, a fact already proven, and upon which the researches of Behring, Kitasato, Tizzioni, Cattani, Richet, Hericourt and

¹ A communication made to The Royal Academy of Naples, and translated by Dr. W. F. Hutchinson, from advance sheets furnished by the author.

others are based, we can see that preference should be given to a bio-chemical explanation thereof, or better still to the phagocytic theory of Metchnikoff.

While it is still too soon to be certain as to how this prevention is produced, we must recognize the fact that, in the case of the bacillus of tuberculosis, it is proven true as modifying the field of culture, as rendering its existence less active or impossible, or in lessening the production of toxins, and so lessening the after toxic state.

Without making this explanation indisputable, it seems certain to me that the researches of Richet and others into the protective action of dog's blood against different infectives ought to be grouped around it, as they thus acquire a certain experimental value.

To all these considerations which encouraged me to repeat the experiments of Richet, there was added the condition which I consider essential in testing a new remedy—the certainty of its being entirely harmless, a fact that was clearly shown in all the studies made in the hospitals of Paris.

When scrupulous asepsis in preparing and preserving the serum, and in making the injections has been observed, this method never presents the smallest inconvenience, except, indeed, a constant urticaria, sometimes general, sometimes diffused, which pursues a benignant course in forty-eight hours.

In selection of the animal, I have always chosen a dog, both on account of greater convenience and less expense, and because of his greater refractoriness to tuberculosis, while goats have occasionally been made tuberculous as a result of experiment.

Since the 3d of February, 1891, ten tuberculous patients, each case having its diagnosis established by bacillar proof, have been received in my clinic.

Four of these were admitted in an advanced stage, so as to possess differential criteria of the value of the experiment. As I had determined to study the new method from all points, and in order to do so without hindrance, I entrusted the dynamometry, the spirometry and measurement of hemoglobin to Dr. Traversa, clinical assistant in my clinic, the preparation of urinary analyses and technique of injections to Dr. Falcona, and begged my illustrious friend and colleague, Dr. Boccardi, Professor of Histology in the University, to make the microscopic studies of expectorates and watch over preparation of the serum. Before any of these patients were subjected to serum injections, they were detained for some time in the clinical hospital, under the most favorable hygienic conditions possible, such as absolute quiet, a uniform, moderate temperature, regulated alimentation, etc. No medicine was given, except such as was required to regulate digestive functions, when the careful dietary proved insufficient.

The doses of serum employed were larger than those at first proposed by Richet. In place of one cubic centigramme daily, I use two; and all my experience makes me believe that it ought to be still further increased; in fact, I have already gone to ten centigrammes daily without any sign of intolerance. As the limits of a paper like this are narrow, I make a résumé of such results of the method as seem to me best worthy of attention.

1. Up to this time, after three months of treatment, not one of these ten cases can be said to be really cured of the local process.

2. In two of the ten cases received, in which there existed large infiltrations, cavities and a very emaciated condition, the treatment has not produced any useful result. The disease continued its course, and after two months injection, one of the patients is dead.

In a third case, where the pulmonary lesions were not so extensive, but where there was constant high fever, the patient grew rapidly, steadily, and progressively worse, although he had been regularly injected for three months. A fourth began to improve sensibly either locally or generally after three weeks' of treatment; but when this gain had gone on a month and without any known cause, he slowly retrograded.

3. In the other six cases, the disease was sensibly modified in its course from the first week of injections. Fever ceased permanently, and the patients presented a general increase in weight and sense of feeling better (*ben essere*), of which they were fully aware, differing totally from the stationary condition which had persisted during the first two months under hygiene alone.

4. In the patients Alberic Botta and Semmiola the morbid pulmonary process diminished in a very remarkable way, and in two cases a complete disappearance was noticed of physical signs, there remaining only a small diminution of respiratory activity.

5. Coincident with this improvement, I noticed a considerable lessening of expectorate and great diminution in the number of bacilli. In the case of the patient Botta, for example, two weeks after his admission, the number of bacilli was between 21 and 23, to each field of observation, and now, after three months of treatment, this number is reduced to a minimum of from 2 to 5. In the patient Semmiola, the reduction was from a maximum of 15 to 20 to a minimum of 1 to 2, and even to complete disappearance on certain days.

6. Together with increase in weight, with progressive improvement in morbid pulmonary process and diminution in number of bacilli, there have also been noticed an increase in respiratory capacity, in urea, and in hemoglobin, which (in the case of Botta) indicated a progressive relative gain from 42 to 87. Hemoglobin measurements were made with an amometer of Von Fleisch, and proofs read from one of Marcy's instruments, latest model.

It seems scarcely worth while to bring the improved cases here for inspection, since, to make a comparison that should be of any value, it would be necessary to see the deplorable condition in which they were received. But I shall take pleasure in accompanying any of your clinicians to the Hospital de la Pace where they are, to examine them, and to give all needed explanations.

And now, finishing as I began, by refraining from conclusions which seem to me as yet premature, I have simply to express my great desire that similar experiments may be made in many other places, and upon a greater number of cases, especially in hospitals, where they are at liberty to remain for months or years if necessary, uninterfered with by official closing of the usual clinics; as in this way only can experiments be pursued to definite results.

Any such improvement as that in the patient of whom I have spoken is inconclusive to me, as it may not prevent a future lethal result, and by this closure of the clinic I shall lose sight of them. So it is out of the question to judge to what extent this improvement might have been carried, even to complete possible cure, toward which, and not to mere classical improvement, all our efforts should be directed.

Permit me again to say, that it is my firm and clear conviction that this method, as well as any other that may be brought forward by blind progressists, should be studied and carefully tested in a biological laboratory.

As last November I foresaw the failure of Koch's remedy, so I now predict that this will not prove a true cure for pulmonary tuberculosis. The advance of scientific therapy in this disease must be towards that which makes the existence of its bacillus less possible; and if this method should prove successful in this way, it would be a genuine laboratory triumph.

Wishing that it might prove so, I feel certain that a tuberculous cannot thus be radically cured, for we cannot reach the pre-tubercular stage, which is really the bio-chemical state conducing to real tuberculosis.

I said at the commencement of this paper, honorable colleagues, and I repeat it, that it will be a long step in advance to be able to sterilize a tuberculous patient in an incomplete stage, so that bacilli cannot develop. A tuberculous without bacilli means that we have transported the patient months or years backward—*i. e.*, that we have recommitted him to the stage when he was tuberculous without knowing it, although inexorably destined to become, in the future, a favorable field for this infection. If we could only recognize in this pre-tuberculous stage, which often begins in intra-uterine life, all who shall later certainly become consumptives, physicians might, through many years, develop those profound modifications of which physiological therapy is capable, which can radically change organic conditions, and impress upon the sufferers a biological bias that should prevent them from becoming later favorable fields for the cultivation of Koch's bacillus. I certainly believe that medicine might change this terrible perspective in many, if not in all cases.

EMPLOYMENT OF PILOCARPINE MURIATE IN LABYRINTHINE DISEASE, WITH REPORT OF CASES.¹

By S. MACCUEN SMITH, M.D.

GENTLEMEN:—Our object in calling attention to the following interesting cases is, as far as possible, to determine the diseases in which pilocarpine may be of decided benefit, and, if possible, to add to its sphere of usefulness.

CASE I.—Mr. F. W., of New Jersey, twenty years of age, has been a bright scholar until within the last two years, when, on account of progressive loss of hearing, he was compelled to leave school and seek medical aid. From a critical examination of the patient, and also of his parents, the personal and family history were pronounced unusually good. The father gave positive assurance of being entirely exempt from any previous specific history, and certainly observation would substantiate his statement, as his entire family of seven children showed impressive evidence of good health.

The patient stated that he had been under treatment for three years with several specialists in neighboring cities, only to meet with discouragement, as his hearing continued to grow worse.

On examination, the external ear and canal were found to be normal; membrana tympani slightly opaque and retracted, otherwise normal, except some inflammation the extent of the manubrium mallei. In the post-nasal space the pharyngeal tonsils were found to be much enlarged, the hypertrophy extending beyond and occluding each Eustachian tube. Very low notes of both aerial and osseous conduction of sound were perceived in each ear—the higher notes not being heard except when intense—which would

seem to prove that the internal ear was at fault; and as the voice could be heard much better than the watch-tick, this would offer additional evidence of internal ear disease. By my watch, which measures fifty inches, the hearing distance of R. E. = $\frac{1}{2}$; of L. E. = quite negative; and yet ordinary conversation from the bass voice could be heard at six feet, but individual words could not be distinguished until the sound wave was intensified.

By removing the enlarged tonsils and post-nasal adenoid growths, the hearing power was somewhat increased by equalizing the atmospheric pressure, and this to an extent correcting the retracted condition of the membrana tympani. Knowing this patient to have been under special treatment for some time, and that the usual methods of procedure had failed to give relief, we deemed a repetition of the same to be a useless experiment, and therefore concluded to place him under the pilocarpine muriate treatment, by hypodermic injections. As the object of such treatment is to produce profuse diaphoresis, the dose to be employed must be in accordance with individual idiosyncrasy. It has been our custom to commence with a small dose, $\frac{1}{16}$ to $\frac{1}{8}$ grain, and gradually increase, until the full physiological effects of the drug are produced, provided contra-indications (*to be determined by previous careful examination*) do not manifest themselves.

The dose usually employed is $\frac{1}{8}$ grain, although $\frac{1}{4}$ grain is frequently necessary. It view of the danger to life that is possible to occur in administering full doses of pilocarpine, Dr. Lawrence Turnbull and other authors advise the use of atropine or strychnine in conjunction with pilocarpine. This is certainly a proper and safe precaution, and should be employed in selected cases; yet, in the greater number of cases, the writer does not find this essential.

As patients cannot usually stand the daily injection, it is our custom to administer one hypodermic every second day; always *insisting* on the patient remaining in bed from three to five hours after each treatment, as the perspiration continues for that length of time, and any undue exposure or exertion may produce unfavorable symptoms. These hypodermics are continued until five, eight, or ten have been given, and then, if additional ones are required, they may be administered at intervals of five to ten days, as the symptoms indicate.

We will now relate the treatment and improvement of the case in question, the details of which are purposely given, as they are intended to express in main the general treatment and improvement of the subsequent cases; the points of difference, however, will be mentioned in each case.

February 2, 1889, we gave the above case the first hypodermic of $\frac{1}{8}$ grain (the hearing distance, you will remember, was R. E. $\frac{1}{2}$, L. E. negative); next day patient thought tinnitus was much less severe; no improvement in hearing; perspiration not profuse. February 4, gave hypodermic of $\frac{1}{8}$ grain, which caused copious diaphoresis, some nausea, and headache. During that evening patient heard wagons passing his window, but could not hear the music from some stringed instruments only fifteen or twenty feet away; his hearing for conversation had materially increased; tinnitus about the same; watch tick, R. E. $\frac{2}{L}$, L. E. $\frac{4}{L}$. It is interesting to note the marked improvement in left ear, which up to this time had been negative.

¹ Read before the Philadelphia County Medical Society, June 24, 1891.

6th, we repeated hypodermic injection of $\frac{1}{8}$ grain, as we found this to produce full physiological effect; perspiration about the same; absence of nausea and headache. The next day patient called and stated his hearing had never been so bad, he being unable to hear anything except very intense *high* notes; he was, therefore, much discouraged; all his previous hopefulness having vanished, he refused to submit to further treatment. However, he called the following day and informed me he would continue treatment, as "he thought nothing could possibly make him worse." The peculiar effects of this last hypodermic were the almost entire loss of hearing and the change to perceiving *only high* notes.

8th, one-sixth grain was again given, which resulted in the hearing being restored to R. E. $\frac{3}{L}$, L. E. $\frac{3}{L}$; tinnitus almost gone; feeling much better in general health and spirits.

10th and 12th, he received $\frac{1}{8}$ grain, with marked improvement in hearing; R. E. $\frac{9}{L}$, L. E. $\frac{11}{L}$; no tinnitus; general health continues to improve.

At this date patient's *father* called to be treated for "some fever blisters on tongue and throat," which, on examination, presented such questionable appearances that I, without hesitation, pronounced them syphilitic. He then admitted having had a chancre when twenty years old (his age at this writing being forty-nine). His excuse for previous false statements was, that every physician whom his son had heretofore consulted questioned his family history, and a confession on the part of the father invariably resulted in the son being put on large increasing doses of iodide of potassium and mercury, which so impaired his health that the treatment was discontinued; and, as his son had never improved under such medication, he concluded to conceal his family history, with the hope that other methods of treatment might be pursued.

Granting that the patient's impairment of hearing was specific in origin, in view of his marked improvement I thought it wise to continue with the pilocarpine treatment, in order to more thoroughly establish its efficiency in this class of cases.

The hypodermics were continued on February 12, and every second day thereafter until eight had been given, at which time his hearing distance was, R. E. $\frac{26}{L}$, L. E. $\frac{32}{L}$; general health improving daily; his weight has increased seven pounds; tinnitus aurium entirely gone.

21st, the patient returned home, feeling that he had entirely recovered; but in two weeks he called again at my office with hearing somewhat impaired, R. E. $\frac{22}{L}$, L. E. $\frac{25}{L}$, which he thought came from "catching cold," due to exposure. I again gave him three hypodermics, his hearing increasing to R. E. $\frac{36}{L}$, L. E. $\frac{30}{L}$. Additional hypodermics did not improve the hearing. Thinking he required some *specific* treatment, and remembering that iodide of potassium and mercury could not be tolerated by his stomach, I prescribed Hosteley's syrup of hydriodic acid in two-drachm doses, four times a day, well diluted in water; also inunctions of one drachm of ung. hydrag. each night and morning. This treatment was continued for six months without experiencing any inconvenience, his hearing remaining about the same; no tinnitus; general health better than ever before, and

at this writing—about fifteen months since beginning treatment—his hearing and general condition continue to be good, although the patient has not been taking any medicine for the past nine months.

CASE II.—Mr. S. G., of Pennsylvania, aged seventy-one years, consulted the writer, with his family physician, July 8, 1888, and gave the following history: On January 6 of the same year, when arising at his usual hour, he was much alarmed at not hearing the customary noise on the street; thinking, however, that his servant had by mistake awakened him at too early an hour, he consulted his watch, and, on finding the hour rather later than usual, and as everything appeared distressingly quiet, he realized that his hearing had been entirely lost during the night. This complete loss of hearing was not attended with pain, tinnitus aurium, discharge from the ears, or inconvenience of any kind.

After being under treatment for three months, and not receiving the slightest benefit, while drinking some *hot* milk by the direction of his physician, he was seized with intense tinnitus aurium, vertigo, and constant emesis *without nausea*, but with entire absence of pain. The emesis continued for only three hours, but the tinnitus and vertigo increased in severity.

In this condition the patient consulted the writer. A more despondent and pitiable mortal could not be imagined. He was not able to walk without assistance, and the tinnitus had prevented sleep for almost two weeks. The membrana tympani and the external auditory canal were normal, excepting the changes peculiar to a person of his years; the post-nasal space, including the Eustachian tubes, were in good condition; in brief, both ears and their appendages presented the usual normal condition in so far as observation alone could determine. In this connection it is interesting to note the entire absence of evidence of disease in such cases. Osseous conduction of sound was well marked, especially in left ear; aerial conduction of sound was quite lost in both ears.

The family physician informed me that his patient had been on large increasing doses of iodide of potassium and mercury, but the stomach would no longer retain the potassium iodide.

We subjected this patient to the pilocarpine treatment, as previously described, with the following results: First treatment resulted in slight decrease in vertigo and tinnitus, but hearing power remains the same; caused some temporary vomiting, which was quite severe for two hours. The second and third hypodermics were given without any appreciable benefit; the fourth and fifth, however, were productive of marked improvement in vertigo and tinnitus, and at the same time caused such changes in the perceptive organs of hearing that he was able to hear intense waves of sound. After the sixth treatment tinnitus and vertigo had almost ceased, and hearing distance increased to $\frac{1}{L}$ in both ears. The seventh and eighth treatments did not produce much change in hearing distance, but entirely relieved vertigo and tinnitus. The ninth hypodermic caused much improvement in hearing: R. E. $\frac{9}{L}$, L. E. $\frac{11}{L}$.

The patient found it necessary to return home, and I directed his family physician to continue the treatment until four additional hypodermics had been given, at the end of which time patient called, with this marked improvement: R. E. $\frac{21}{L}$, L. E. $\frac{27}{L}$. The patient's business called him to the far West, and re-

quired his being away for four months. I gave him Hostelley's syrup of hydriodic acid to take during his absence. On his return the condition of hearing was almost normal, and remains the same at this writing.

As the details of a large number of such cases would consume much time and space, and withal prove tiresome, the object of this paper will have been accomplished by briefly stating that the writer has treated forty-seven cases of greater or less impairment of hearing—some amounting to almost entire deafness—by the method of hypodermic injections of pilocarpine muriate; and that from his observations in these cases he feels justified in expressing the following conclusions:

That age and sex have no influence on the success or failure of treatment.

That in recently developed deafness with tinnitus this treatment is much more hopeful of success than in cases of longer duration. In one case, however, which was of specific origin, the patient, aged seventy-two years, had been almost deaf for twenty-two years, and yet this was one of the most successful cases treated. Nevertheless, this must be considered as very exceptional.

That cases of chronic suppurative otitis media with some degree of impaired hearing, resulting from the exanthematous fevers, are not proper cases to receive benefit from this method of treatment.

That deafness, vertigo, and tinnitus arising from syphilis seem to be especially benefited by the subcutaneous injection of pilocarpine.

That these results can only be attained by pushing the pilocarpine to its full physiological effect, and that profuse diaphoresis must be obtained in every case.

HOW TO USE MYDRIATICS.¹

By EDWARD JACKSON, M.D.,

Professor of diseases of the eye in the Philadelphia Polyclinic; surgeon to Wills Eye Hospital, etc.

THE present purpose is to discuss methods, not indications, for using these drugs; but, in passing, it is worth repeating, since it is so often forgotten, that remedies of this sort are too powerful to be used indiscriminately. If one has not been able to make a positive diagnosis in a case of ocular inflammation, to clearly recognize the indications, and to definitely exclude the contra-indications for one of these drugs, he should let them alone, and confine his hit-or-miss prescribing to such agents as boric acid, or weak solutions of common salt, whose power for harm is really very slight.

These drugs are applied to the eye for their direct influence on the cornea, iris, or ciliary body. In either case they must be absorbed through the cornea, the lymph streams of which are in close relation with those of the anterior chamber. Any portion of the drug that may be absorbed from other parts of the conjunctival sac is carried into the general circulation without coming in contact with the structures it is intended to influence. Any solution placed in the conjunctival sac is almost immediately diluted by the lachrymal secretion present; only the part with which it first comes in contact receives it of full strength. Now, if the amount of fluid instilled is very large as compared with the amount of tears diluting it, the dilution is of very little importance. But instillations of large amounts of mydriatic solutions are not

advisable, because they give the maximum of absorption into the general circulation with the minimum of effect on the eye. And one thing to be constantly guarded against in the use of mydriatics is the excess of constitutional action. Therefore, a mydriatic solution used in the eye should be instilled so as to come immediately in contact with the cornea while of full strength; that is, it should be placed at the upper margin of the cornea, allowed to flow over the surface of that membrane, and the closure of the lids prevented as long as possible, to allow absorption to occur before the fluid is swept away by the movements of the lids and diluted with the tears.

Instilled in this way, the concentration of the solution when it comes in contact with the corneal tissue, and consequently the amount absorbed, may be ten times as great as if the single drop of the same solution had been placed in some other part of the conjunctival sac. Thus applied, a very small drop of solution suffices to bathe the whole cornea. A dropper giving a small drop is therefore to be chosen. One is really obtained with a small point that will drop half-minims, or even less. The use of such a dropper allows the employment of stronger solutions than it would otherwise be safe to employ, or a larger number of instillations may be made in the same space of time without producing symptoms of mydriatic poisoning.

It is by attention to such a minute point of technique that one surgeon will at once secure the dilatation of an inflamed iris, or the complete relaxation of the accommodation under homatropine, where another less careful will fail to attain the end sought, or to give relief to his patient. And even where the utmost power of the mydriatic does not need to be exerted, to obtain the effect that is required with the least danger of constitutional symptoms, or with the minimum of constitutional disturbance, is a very important point; for these symptoms, although really not indicating any danger to life, are extremely annoying and alarming to the patient. They occur quite frequently after the use of mydriatic solutions, and such occurrence has much to do with the objection of patients to the use of mydriatics in the diagnosis of ametropia.

The strength of the solution of one of these drugs to be used in the eye varies with the purpose for which it is used. To break up the adhesions in a case of iritis, the stronger mydriatics are to be employed and in strong solution. As atropine sulphate 1 to water 50, or about 10 grains to the fluidounce; daturine sulphate 1 to water 100, or about 5 grains to the fluidounce; duboisine sulphate 1 to water 100, or about 5 grains to the fluidounce; hyoscyamine sulphate or hydrobromate 1 to water 100, or about 5 grains to the fluidounce. The effect of either of these solutions may be somewhat increased by using cocaine with it. But the patient should not be intrusted with the cocaine solution for home use, because the temporary comfort it gives, in many cases, leads sometimes to dangerous excess. Either of the above solutions is to be used, one small drop in the eye at a time at intervals of ten minutes, until the dilatation of the pupil is secured, and then at such intervals as may be necessary to maintain such dilatation; and continued three times daily until it can be replaced by a weaker solution.

In making the mydriatic attack on a case of plastic iritis, it is, to a certain extent, simply a question of whether we can get enough of the mydriatic into the eye without getting too much into the general circulation. And to accomplish this we must prevent the

¹ Read before the Philadelphia County Medical Society, June 24, 1891.

solution from making its way into the tear passages, and so being absorbed from the respiratory and digestive tracts, as well as from the conjunctiva. For this purpose it is often recommended to make pressure on the inner canthus. But such pressure is quite ineffective. Even the placing of a little clamp on each canaliculus, as proposed by Dr. Tansley (Trans. Amer. Ophthalmological Society, 1888), does good mainly by the displacement of the puncta that it causes. The most effective means is to so draw on the skin of the lids as to evert the puncta, and hold in contact with them a small pledget of dry absorbent cotton. This will prevent the passage of any fluid from the eye into the lachrymal sac, and permit us to apply the mydriatic vigorously to the cornea.

For paralyzing the accommodation of the eye, solutions of the same drugs of about half the above-mentioned strengths may be instilled three or four times daily.

Probably a single efficient instillation of this kind, or, at most, two or three, would be sufficient to produce complete paralysis of the accommodation in almost every case, with the eye in anything like normal condition. But frequently the instillation must be intrusted to unskilled hands, and so may produce but a small fraction of its full effect, and in a few cases the active hyperæmia, caused by the mydriatic and involving the anterior segment of the globe, may increase the difficulty of attaining complete ciliary paralysis; so that it may be necessary to continue such applications for some days.

For simply paralyzing the accommodation, however, our most valuable agent is homatropine, commonly used in the form of the hydrobromate. Of this a 2 or 3 per cent. solution, 10 or 15 grains to the fluidounce, should be instilled every five or ten minutes until at least four efficient applications have been made. Used in this way, I have found it a perfectly reliable and efficient paralyzant of the accommodation, even in the presence of high grades of retino choroidal irritation and general hyperæmia of the eye. But we have not with this drug the excess, or reserve of power to control the ciliary muscle, that is possessed by the other mydriatics named. Every instillation, or, at least, a sufficient number of them must be efficient. The cornea must have the chance of absorbing the solution at nearly its full strength; and for that reason the application of the drug must be intrusted only to skilled hands, usually attended to by the surgeon himself.

To bring about this simple dilatation of the pupil our choice of the drug will be determined by whether the dilatation is to be long sustained as a measure of treatment, or only temporary as for purposes of diagnosis. In the former case atropine is to be used, in the latter homatropine or cocaine. Atropine or homatropine should be employed in a solution one-tenth the strength of those used for paralyzing the accommodation, or even weaker than this. The atropine to be repeated as often as the pupil contracts again, say once every one, two, or three days; the others, of course, used only the once.

Cocaine, which is of especial value as a dilator of the pupil, is to be used in solutions of the ordinary strength ordinarily employed for producing local anaesthesia of the eye; that is, 2 to 4 per cent. But the instillation must be made at least thirty minutes, often an hour, before the dilatation is desired. The anaesthetic action often having quite passed away before the dilatation of the pupil becomes noticeable, and repeated instillations do not very greatly hasten this dilatation. As a paralyzant of accommodation co-

caine has very little power, and by itself is not at all valuable for the purpose. But it can sometimes be advantageously combined with homatropine. Here the frequent repetitions of the instillation, as in the case of iritis, give the advantage of local anaesthesia, greatly lessened resistance on the part of some patients, and prevention of the excessive secretion of tears that follows each instillation of homatropine alone, and by dilution of the solution lessens the intra-ocular effects produced, as well as an apparent hastening of absorption. For this purpose the solution may be made with 2 or 3 per cent. each, of cocaine and homatropine.

The instillation of a strong solution of any of the mydriatics causes a pericorneal hyperæmia, which, though not serious, is sometimes alarming to the patient or his friends. This phenomena I pointed out in a paper on homatropine, published in *The Medical News*, July 18. It is especially liable to occur from the use of homatropine, because this is more likely to be used in stronger solutions. The combination with cocaine lessens this tendency to a considerable extent.

TREATMENT OF THE OPIUM NEUROSIS.¹

By STEPHEN LETT, M.D.,

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IT is not my intention to enter into elaborate statistics to prove the prevalence of the opium disease, or to discuss the causes which operate in its production; suffice it to say that the habitual consumption of opium or its products does exist to a very alarming extent in this country, and that some of the causes which give rise to this malady are under our control, others are beyond our power. Nor do I purpose portraying the dire physical and mental manifestations resulting from the daily and prolonged use of the drug, interesting and instructive as the subject might prove to be; but rather do I wish to confine myself to a consideration of the treatment of this neurosis as it is presented to us, and indicate those methods which in my hands have proved most practicable, and, in my opinion, are calculated to produce the best results.

In that plan of treatment which I am about to advocate, I cannot lay claim to originality. I have closely followed the lines marked out by others. Experience, however, has caused me to make some modification in detail. But the general course adopted essentially consists in that plan of treatment known as "gradual reduction."

In attempting to treat the opium disease it is all important that the physician should eliminate from his mind the *vice* theory, and consider his case in the light of a disease, or pure neurosis, presenting certain pathological conditions which skill, patience, and sympathy are required to successfully combat, fully as much as when treating other forms of disease.

What the special pathology of this disease is has not been clearly demonstrated; but that such a condition exists, can hardly be questioned; indeed it has been strongly insisted upon by eminent authority.

When we find a patient able to take repeated poisonous doses of such a drug as opium with perfect impunity, and when it is demonstrated that such doses are essential to his bodily comfort, or even necessary to sustain life itself, certainly there is the justifiable inference that some change in the animal economy

¹ Read at meeting of American Medical Association at Washington, D. C.

has taken place, that a departure from normal action is set up, and that a pathological condition is established. Dr. Clouston, in the July, 1890, number of the *Quarterly Journal of Inebriety*, clearly recognized this diseased condition, whilst, in the *Alienist and Neurologist* for July, 1886, Dr. Charles L. Hughes, of St. Louis, makes mention of it in the following language: "The long continued use of opium or its salts engenders a disorder of the nervous system which is entitled to distinct recognition. Its sequence is as much a pathological entity as alcoholism, saturnism, hysteria, or chorea. Meco-neuro-pathy," he says, "is as much entitled to recognition as that well-known disease epilepsy." This assertion he fortifies by many interesting and undisputable facts, and in this connection he paints a vividly realistic picture of, and calls particular attention to, the dire results consequent upon suddenly depriving an opium habituate of the accustomed drug. Many other eminent men hold the same opinion, and I look forward to see, at no distant date, these assertions verified by microscopic demonstration.

These pathological changes appear to take place chiefly in the nervous system, more particularly in the great nerve centres, and thus false impressions are conveyed to all organs of the body, thereby interfering with the due performance of their several physiological functions, producing disturbances and discord where harmony and normal action should exist.

Without inquiring further into the pathology of chronic opium poisoning, and accepting as fact that disease does exist, it remains for me to give a resumé of the methods of treatment at present advocated and adopted.

In the first place we must bear in mind that there is no drug known to the medical profession which will cure this neurosis. We have no specific for it. Substitutes there may be; but substitution is not curing the disease, and the risk of producing a worse neurosis thereby requires extreme caution as to the selection of such a remedy.

Three separate and distinct modes of treating the opium habit are advocated and practised:

1. That of abrupt and total withdrawal of the drug.
2. Its rapid reduction.
3. Gradual reduction.

ABRUPT WITHDRAWAL.

As regards the abrupt withdrawal of the drug, I cannot for a moment countenance such a barbarous, inhuman and dangerous procedure, involving, as it does, the most exquisite torture, which no being on earth can fully realize save the opium habituate deprived of his opium. The shock to the nervous system, suddenly bereft of its stimulus, is so intense as to make a lasting impression thereon, which is manifested in disturbance of the higher brain functions, and the risk of fatal collapse is unjustifiable. Words fail me to express the reprehension I would cast upon those who set out upon this despotic course. Nor can I convey to you an adequate idea of the misery and suffering it entails upon a most pitiable and helpless creature. I am astonished beyond measure to find so eminent an authority as Dr. Clouston, of the Royal Edinburgh Asylum, advocating and carrying this treatment into practice. The deservedly recognized marked attainments he possesses, the careful and sound observations he has made and recorded in other neuropathic disorders, the valuable work on insanity he has published—a book which should adorn the library of every asylum physician, and the distinguished position he occupies

amongst his confreres, gives weight to anything from Dr. Clouston's pen as coming "ex-cathedra." I would not dare thus to criticise his treatment of the morphinomaniac were it not that I feel it a duty to humanity to protest against such cruelties being practised upon a most unfortunate class of sufferers who are powerless to defend themselves.

How a man endowed with the keen, accurate perception and high educational attainments of Dr. Clouston, whose long and varied experience amongst the mentally afflicted must have developed in a marked degree that sympathy for suffering humanity which is so essential to the successful treatment of the insane, could ever advocate, much less carry into practice, such "heroic" treatment of a morphine habituate as abrupt refusal of morphine, is, to me at least, a problem incapable of solution.

In his article published in the *Quarterly Journal of Inebriety*, Vol. XII., No. 4, page 311, he clearly recognizes the diseased condition we are now considering, and truly describes in terse language the subject thereof in the following words: "A morphinomaniac in the advanced stage of his complaint is a most miserable object in mind and body. He is manifestly diseased in all his nerves and most of his other functions. There is just one other being on earth who is more miserable-looking and more miserable, and that is the morphinomaniac who is being cured by enforced abstinence. The one is alive, the other is more than half dead. As we shall see, the fight is not altogether for the cure of the deadly habit, but in the first instance to enable the patient to live through the cure."

Such are Dr. Clouston's accurate observations; nevertheless in the very next paragraph he gives us a sample of his mode of curing this disease by *enforced abstinence*, which, he admits with truth, causes a fight to keep the patient alive. Look at the pitiable subject he practises this on—a man weighted down in the first instance with a "distinct nervous diathesis," who at an early age suffered under a severe illness which left him weak and sleepless. He "crams" beyond his strength to pass examinations at college, buoys himself up on opium; he becomes the subject of rheumatic arthritis; at the end of twenty-five years of morphine disease, under compulsion, he places himself as "a voluntary patient" in an asylum. He now presents the appearance of "a broken-down looking man," a physical and mental wreck. He was treated with beef-tea and brandy. "The beef-tea (we are told), "caused diarrhoea and had to be stopped. He could retain milk, liquid custards, and brandy better than anything else. The heart's action became very weak, and digitalis seemed to strengthen it. *No morphine was given*. For a week he was horribly depressed and debilitated, and his life was certainly in danger. Under chloral and bromides he slept restlessly and awoke with a feeling of horrors."

Contrary to what I would have expected, he weathered the storm and reached anchorage, but what a wreck? These are Dr. Clouston's own words: "His brain is irretrievably damaged in all its higher functions by his twenty-five years continuous intoxication by opium."

How sublimely does the doctor take shelter behind this twenty-five years of so-called "intoxication of opium," and ascribe to this cause all the permanent damage done to the "higher brain functions." Granted that the opinion was an important factor in the production of this dire result, did not the fearful ordeal the unfortunate victim went through, when suddenly deprived of his beloved drug, tend to still further disorganize an already mentally depressed

and physically diseased condition? Could the same man, crippled as he was with an originally unstable nervous organization, even though he had never tasted an opiate, have gone through a similar ordeal and retained the "*Mens sana in corpore sano*?" Would not a milder form of treatment have at least prevented so terrible a shock and given nature a far better chance to repair the inroads made upon the patient's health by the long-continued morphine addiction? What was there in the result attained that compensated in the smallest measure for the terrible suffering endured in effecting a so-called cure? What advantage accrued either to the patient, society or to science by this barbarous treatment? Would it not have been better to permit the poor creature to continue his morphine, and in his own way enjoy what few years were left him to live, and when death was inevitable, have quietly and tenderly lowered him to his grave with as little pain as possible?

Two other cases are recorded by Dr. Clouston in the same article, the same line of treatment was adopted, the same ordeal passed through, similar results obtained. If this is success, if this is a cure, "I will none of it." I have said enough about the abrupt withdrawal plan of treatment. Let us draw a curtain over this horrible picture to hide it from view, and pass from so revolting a topic to the second plan of treatment—that of

RAPID REDUCTION.

I regret being unable to speak from experience as to the merits or demerits of the rapid withdrawal plan of treating the opium habituate. Such has not been my practice, therefore what I may say regarding it is gleaned from the literature pertaining thereto, more especially the publications of my friend Dr. Mattison, of Brooklyn, and those of Professor Ball, of Paris Faculty of Medicine. Both these gentlemen, as well as many others, appear to have met with marked success and satisfactory results. Certainly this method of treatment seems to carry with it many advantages. The time occupied in removing the drug from the circulation is comparatively short, from eight days, or less, to two or three weeks. Yet it is withdrawn by such graduations that the shock to the nervous system is not so great, or the danger of collapse so imminent as when the patient is at once deprived of all opiates; at the same time other remedies are employed which appear to have the desirable effect of quieting the nervous system and sustaining the patient whilst the final withdrawal is being accomplished, thereby safely carrying him through a crisis otherwise critical. When this object is attained the special remedies employed are apparently discontinued without inconvenience. Amongst the agents so employed may be enumerated general and special stimulants, cardiac tonics and nerve sedatives, amongst which may be enumerated ether, alcohol, nitro-glycerine, sulphate of spartein, the various preparations of valerian, Jamaica dogwood, cannabis indica, belladonna, hyoscyne, electricity, hydrocyanic acid, phosphoric acid, paraldehyde, chloral and the bromides, especially the bromide of soda in large doses, mounting up to one ounce per day. This latter has been especially brought to the notice of the profession by Dr. Mattison, in whose hands it appears to have proved a valuable remedy, fulfilling a most important office and safely meeting all required indications. As accessories, hot mustard, salt, or electric baths, sustaining nourishment, careful nursing and the best hygienic surroundings.

As already stated, I have not followed out the treatment by rapid reduction, chiefly because I have found the more gradual method, though involving more time, eminently satisfactory, and have thereby safely and successfully cured many patients whose enfeebled condition appeared to me to prohibit the more rapid method. I must also confess being somewhat skeptical as to the ease and freedom from pain with which an opium habituate can be cured by rapid reduction, and before abandoning the mode which I have found satisfactory I would like more information than I possess as to the experience of pain, discomfort, restlessness and general relaxation of the mucous membranes in the patient—whether in the rapid reduction plan such phenomena are severe or merely trivial in character. Again it appears to me that the time required to restore the general health and overcome the inroads made upon it by years of opium addiction, is quite equal to the extra time involved by the gradual reduction method. Many writers state that fully six months should be occupied in such restoration, but I know that in practice the rule is a much shorter period spent under special medical supervision.

GRADUAL REDUCTION.

It now remains for me to consider the third mode of treatment, viz., that of Gradual Reduction, advocated by Dr. Hughes, of St. Louis, and practised by myself and many others. It is claimed to be a rational, humane and safe line of treatment, reassuring to the patients, and, what is all important, presents to their minds a feasible and comparatively easy mode of casting off those shackles which have bound them for so many years, making them veritable slaves to an overpowering drug which is gradually, but surely, pressing them onward to meet a miserable and appalling death, which comes at last as a relief to a more pitiful and painful existence.

This treatment essentially consists in a slow, even and methodical withdrawal of the drug, without substitution; at the same time using all the means known to medical science to restore, as far as possible, the shattered nervous system, which is the universal condition of all these cases. The gradual withdrawal of the opiate is effected by decreasing the amount by fractions of a grain at each dose, and the following is a general outline of my mode of procedure.

Having, by a categorical inquiry, ascertained as nearly as possible the amount of opiate the patient is in the habit of taking during twenty-four hours, I calculate its equivalent of morphine, and then, dividing this amount by the number of times it is necessary for him to resort to it during the day, a fair approximate of a single dose is arrived at. This is carefully weighed, administered, and its effects noted, especially as to the following points:

Does it sufficiently sustain the patient and keep him comfortable?

How long does its effect last?

When will a repetition of it be necessary to prevent depression, and would a smaller dose suffice?

In a few days, by careful observations of this nature, accuracy is obtained, a basis of treatment instituted, and reduction of the drug commenced. The rate at which reduction progresses must be governed entirely by the nature of the case in hand. Some patients will bear to have their doses reduced faster than others; much depends upon the physical condition and the quantity of opiate customarily consumed. Those taking large quantities can, at the

commencement, be reduced faster than where a less amount is the starting point. The guiding rule is, to remember that there is a point at which the patient remains comfortable for a certain number of hours. That point can be noted between the extremes of stimulation by excessive opiate and depression consequent upon too small a dose; and upon the accuracy of adjustment of the dose to this point depends the ease or the discomfort of the patient, and success in treatment. The rate of reduction also varies with the progress of the case; as a rule, when treatment is commenced with a patient taking, say, 20 grains of morphine a day, reduction can be effected at the rate of about 1 grain every three days. As the quantity taken in twenty-four hours gets less, so also must reduction be more gradual, so that it will require four, five, six, or even ten days to withdraw a single grain. When a stage is reached at which only 1 grain is consumed in twenty-four hours, the greatest skill, care, and caution are necessary to remove this single grain, to do which I usually occupy from three to four weeks, gradually paring a fraction of a grain from each dose; and when you remember that that last grain is divided into perhaps three or four doses in the day, the final dose being brought down to so fine a point as $\frac{1}{10000}$ of a grain, you can appreciate the delicate and gentle manner in which it is withdrawn. No appreciable difference in the dose is noticed by the patient; no shock is produced on the nervous system; the dreaded upsetting of the stomach is avoided; there is little or no relaxation of the mucous membranes; diarrhoea is almost absent, or, if present, is so mild that the patient will not complain of it. There is no restlessness, or inability to continue at a fixed occupation. Sleep is usually good, natural, and refreshing, and the patient finally slips from under the yoke of the demon opium without being able to note when he took his last dose, emerging from his years of tyrannical bondage with a new lease of life, buoyant in spirits, physically improved, and mentally bright.

Such a course of treatment necessarily involves constant and ever watchful care on the part of the medical attendant, and physicians who are not prepared to devote time and patience to it had better not set out on the task. To those who follow it out faithfully the result will prove an ample reward for all the trouble involved. I would urge that each dose be put up by the physician himself; accuracy in measurement is essential; none the less so is punctuality in the time of administration. These cannot be attained without some fixed method to work upon; but with such method the task is not so insuperable as might at first appear, though I doubt if the general practitioner could carry it out; the uncertainty of his movements and other imperious demands made upon his time would seriously conflict.

Thus I have given you a general outline of the method I adopt.

Certain modifications are necessary to meet special exigencies. Should reduction be going on too rapidly, and signs of depression set in, the patient is easily righted by halting for a few days and holding him at the point reached. It is sometimes astonishing to see how rapidly the system will respond to this rest; in a short time the patient will be bright and buoyant, when reduction may again be safely resumed, though perhaps at a slackened pace. In some cases many such rests are required; in others, reduction may proceed steadily from commencement to finish without inconvenience.

Concurrent with this reducing process our skill must be directed to restoring the physical health and bringing it as nearly as may be to a natural standard. Sustaining nourishment, if necessary, repeated at short intervals. Frequently a light meal at bed-time is of great advantage; but usually the appetite soon improves, and regular meals are enjoyed. Out-door exercise and pleasant recreations of a light nature, short of fatigue, should be encouraged. Tonics, chiefly iron and quinine, in tonic doses. The syrup of the hypophosphites is an admirable form. Some cases, however, do not bear the strychnine well; where it is tolerated it proves useful. In emaciated cases, cod-liver oil emulsion will be found of service.

If, from causes you cannot control, time is an important consideration, and you are obliged to push the reduction more rapidly than sound judgment would dictate, restlessness and loss of sleep coming on, $\frac{1}{2}$ gr. doses ext. cannabis indica will prove a valuable aid. Hot salt baths, with friction to the skin, is of much value; $\frac{1}{2}$ oz. doses fluid ext. humuli often produce refreshing sleep, or occasional doses of chloral, paraldehyde, or antipyrine at bed-time will be followed by good results. Electricity and stimulating liniments will allay the rheumatoid pains sure to arise if too rapid reduction is practised. Gelsiminum will relieve old neuralgia now likely to give trouble.

All opium patients are more or less troubled with constipation, oftentimes very obstinate. Keep the bowels regulated, but do not make a "balaclava charge" on the intestinal canal by giving drastic purgatives; paralyzed nerves resent such treatment. "Milder measures best prevail." A copious enema will relieve the lower bowel and lubricate the passage for the discharge of hardened accumulations; a mild mercurial is often of much service. When it is desirable simply to clean the bowels, my "sheet anchor" is fl. ext. cascara sagrada and glycerine, in equal parts.

Alcohol, in any form, I disapprove of; it invariably causes a demand for more morphine. Bromide of potash, in sufficient doses to be of any use, causes too much after-depression. Cocaine, in the treatment of the opium habit, I have tried, and discarded as dangerous in the extreme.

In cases of double addiction to morphine and alcohol, or morphine and cocaine, I invariably withdraw the alcohol or cocaine at once, and continue the morphine, giving sufficiently large doses to keep the patient comfortable. I can fight and conquer one devil, but not two. Whatever form of opiate is used, I discard it at once and give its equivalent of morphine. So, also, with the use of the hypodermic syringe; I abandon that and administer morphine by the mouth. Patients are apt to object to this at first, but they soon realize the many advantages gained by the change, and readily acquiesce. The same dose administered by the mouth will sustain the patient fully as well as when given hypodermically. It is, however, less prompt in its action, but more lasting.

Dealing with much broken down and highly nervous patients, I permit them to retain their syringe and morphine until they become accustomed to their surroundings and the new order of affairs. It is a source of much comfort to them, dispels their fears, and, in my experience, the instrument will not be used unless necessity requires it. In a few days, when confidence is established, the syringe and all morphine will be voluntarily handed to me, and the patient will place himself entirely and unreservedly

under my care, willing to assist in the treatment of his case to the utmost of his ability.

Lastly, I would enjoin you to pour out your full sympathy toward the unfortunate opium habituate, who has fought a hard battle before he summoned up enough courage to present himself to you for treatment. He needs help. He needs care. He needs kindness. He has suffered long years of torture; been tossed hither and thither, like a rudderless vessel, upon the turbulent waves of a cold and austere world, looked upon as a vicious outcast, whose every action is treated with suspicion. His statements have been doubted; his case mismanaged. Give credence, or at least attention, to what he tells you. Extend a rescuing hand to the drowning man. Pour oil and wine on his smarting wounds; let your sympathy and aid go out to him. You will thus light for him a lamp amid the deepest gloom of despair, and have the heartfelt and enduring thankfulness of a rescued fellow-being.

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, June 24, 1891.

The President, JOHN B. ROBERTS, M.D., in the Chair.

DR. S. MACCUEEN SMITH submitted a paper on

EMPLOYMENT OF PILOCARPINE MURIATE IN LABYRINTHINE DISEASE, WITH REPORT OF CASES.¹

DR. EDWARD JACKSON read a paper on

HOW TO USE MYDRIATICS.²

DISCUSSION.

DR. P. B. SCHNEIDEMAN: I wish merely to call attention to the change which takes place in mydriatics when kept in solution, from the formation of a precipitate due to the growth of a fungus. I do not think that this interferes with the efficiency of the solution, although it may increase the pain. We should also remember that when we entrust the mydriatic to the hands of the patient or his friends, we often fail to get complete paralysis of the accommodation. In hospital work we often find the mydriasis disappointing on this account.

PETROLATUM, EXHIBITED BY DR. JOHN AULDE.

The subject of petrolatum, was introduced into the Pharmacopœia of 1880 to cover several important products, such as cosmoline and vaseline. A considerable lack of knowledge exists in the minds of physicians in regard to the various petrolatum products. My object to-night is mainly to call attention to the appearances of these products. I have used petrolatum products largely, and have accumulated a number of specimens which I shall present to-night. Petrolatum is extensively used for many purposes. It is largely used by veterinarians. It is used by actresses, who first apply perfectly colorless cosmoline to the face and follow it with any desired powder. After the performance the whole is washed off with a little cologne. It has been found that the colored petrolatum products produce

discoloration of the skin. Cosmoline is perfectly innocuous, and may be taken into the system without harm. Through the kindness of Mr. Drill, the superintendent of a large factory where these products are made from crude petroleum, I had an opportunity of observing the processes. I was told by the workmen that when they have a bad cold they fill the nostrils with cosmoline and the trouble is quickly relieved.

These products are obtained by fractional distillation. The first 20 per cent. is called naphtha, and embraces several substances, such as rhigolene, benzine, naphthol, etc. The next 50 per cent. that passes over is composed of illuminating oil. This leaves about 30 per cent., 15 of which is called neutral product, and 15 per cent. called petrolatum stock. From this last cosmoline is manufactured. The neutral product is decolorized by filtration through bone black. It contains a certain proportion of paraffine wax. This neutral product corresponds closely to teraline, which has been extensively advertised as a remedy for consumption. The paraffine is removed by crystallization and freezing. Teraline may be of great benefit, because it contains this wax. Suppose you have a case of inflammation of the bowels with distention of the capillaries and absorption of poisonous bodies, the use of an oil containing wax would act as a local protective, as does bismuth.

Here I show you a colorless product called glycoline, alboline, and several similar names. This is an oil with the paraffine and coloring matter removed. It is made both as a liquid and as a semi-solid substance. Here is the liquid paraffine of the German Pharmacopœia, which closely corresponds with our alboline. Here I have a number of preparations of petroleum stock, varying in color from white to dark-yellow. Here is crude petroleum in various forms.

Here I have a section of lung tissue prepared in the following way: It is thoroughly washed with water, then with alcohol and dealcoholized. A mixture of oil of cloves and oil of cedar, mixed in such proportions that a glass rod introduced into the mixture shows no angular refraction, is introduced into the lung tissue, and the whole covered with paraffine wax and a little resin, and then dipped into ice-water. It can then be readily cut with a knife.

DISCUSSION.

DR. S. SOLIS-COHEN: I use petroleum products in two ways—one internal, and the other as a vehicle for applications to the mucous membranes. Crude petroleum is very valuable in the treatment of pulmonary complaints, especially certain stages of phthisis. It is useful combined with iodoform. Two or three grains of iodoform may be combined with an equal quantity of crude petroleum, and administered in capsules. So-called alboline, or a modification of it called benzonole, is useful as a vehicle for menthol and other agents, to be applied to the respiratory mucous membrane.

MR. BRILL: There is little to be added to what has been said by Dr. Aulde. Few physicians seem to know anything about the practical preparation of these products. The idea seems to be that cosmoline is a by-product. It never was a by-product. It is really the most valuable part of the petroleum distillation. The first 70 per cent. of the distillate is worth probably five cents a gallon, while the remaining 30 per cent. is worth from twelve to twenty-five cents a gallon. The quantity of these products has greatly increased. Where pounds were used ten years ago tons are now used, and it is sent all over the world.

¹ See page 21.

² See page 23.

DR. ROBINSON: I wish to refer to a single experience with liquid cosmoline. A man came to me with acute gonorrhœa, and was anxious that something be done to relieve him at once. I injected about 2 drachms of liquid vaseline into the urethra. The symptoms at once began to subside, and the man had a very short attack—the second and third stages being absent. I do not know that the injection had anything to do with it, but I thought it well to relate this experience.

DR. WILLIAM F. WAUGH: A few years ago, an effort was made in France to introduce petroleum products as vehicles for the hypodermic use of remedies. It was shown that the purified oils were innocuous, as much as a kilogramme having been injected beneath the skin of a horse at one time without causing irritation. In some respects the experiments were of value. It was shown that in this way 20 minims of purified creasote could be introduced at a single dose. If creasote is useful at all in phthisis as a germicidal remedy, the advantage of giving so large a quantity would render this method of some importance.

DR. JAMES COLLINS: I well remember the time when the first specimen of a curious oil, said to come from the earth, was brought to the laboratory of a chemist, who proceeded to investigate it. He obtained naphthol, paraffine, and some other products from it. He brought the subject to the attention of some friends, who asked him if he had exhausted the oil. "No," he said; "the resources of chemistry would be exhausted by this agent." This was a long time ago, and the clang and clamor of the war drove the subject from my mind. When I returned to practice, I began the use of these petroleum products, and since then cosmoline and alboline have been in my office constantly. I use them in nasal and throat affections. The only use in which I have been disappointed has been in phthisis. I have tried terraline faithfully, but it has failed to fulfil the promises made for it. As an internal remedy, petrolatum has not been satisfactory, and it is probable that the digestion of this hydrocarbon is not as perfect as that of some other hydrocarbons.

DR. AULDE: I have nothing further to add, except to say that I purpose preparing a paper referring to the therapeutic indications of the petrolatum products. I believe that too much has been expected of this agent. The use of these products internally should be only as an assistant to other constitutional remedies. They are not absorbed, and can only do good by their local effect.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

STAINING THE TUBERCLE BACILLUS.

PLACE the sputum on filter paper, so as to absorb the watery and leave the thicker, more viscid portion; spread a small amount of the sputum on a cover glass, and allow it to dry in the air (not over a flame). After having allowed it to dry in the air, it is next necessary rapidly to pass the cover glass, with the specimen on it, three times through the flame of an alcohol lamp.

The solution used for staining is Ziehl's, which is made as follows:

Fuchsin (or aniline red).....	1 part.
Carbolic acid	5 parts.
Alcohol	10 parts.
Water	84 parts.

The specimen has the staining solution dropped upon it and is slowly heated until vapors rise. The staining material is then poured off, leaving the specimen colored red. To decolorize it, place first in a solution of 2 or 3 drops of nitric acid in water, and further, by placing in alcohol. After this, pass it through water. By this process, the color is taken out of everything in the specimen, except the tubercle bacillus (if it is there). Then dry, mount with balsam, and the specimen is ready for examination.

—Laplace.

Forsimpleconjunctivitis, Prof. Keyser, recommends

Acidi borici.....	gr. x.
Aquæ destil.....	ʒj

to be dropped into the eye 3 or 4 times daily; if this does not suffice, acetate of zinc or sulphate of zinc, gr. ss to ʒ of water may be used.

Do not give cocaine in cases of ulceration of the cornea, as although it relieves the pain for the time, the sudden filling of the vessels afterward, causes excruciating pain.

Yellow oxide of mercury.....	gr. viij.
Ext. belladonna	ʒj.
Lard (sufficient to make ointment)	

placed on a piece of writing paper and stuck over the forehead, will relieve the pain.—Keyser.

In all affections of the cornea, hot water (not over 105° F.) applications are about the best general treatment. In affections of the conjunctivæ, cold water may sometimes be used. Where an ulceration occurs without injury, there is always an atonic condition, which must be treated. In superficial ulceration of the cornea, use yellow oxide of mercury, gr. ¼ or ½ with benzoined lard, ʒj.—Keyser.

For hoarseness, without cough or expectoration, following malaria, Prof. Waugh, presuming it to be catarrh of the larynx, ordered cantharides blister over the larynx; internally, inhalations of compound tincture of benzoin in hot water.

Prof. Waugh presented a case of erysipelas of the face and scalp. He ordered, as an antiseptic lotion, chlorinated soda, one tablespoonful to a pint of water, with which the face and scalp were to be thoroughly washed; internally, ʒss. doses of fluid ext. jaborandi, until its constitutional effects are produced.

Erysipelas occurs in two distinct classes, those who are full blooded and those who are anæmic. In those who are anæmic, iron is good; in the other class it is not. Where the erysipelas does not occur from a weakened condition, jaborandi will cure it completely.—Waugh.

TREATMENT OF A CASE OF ACNE.

Evacuation of the contents of papules and pustules. Washing of face night and morning with water as hot as can be borne. This stimulates the absorbent action of the blood-vessels.

Externally, after washing, the following ointment:

R.—Acidi borici.....	gr. xx.
Olei eucalypti.....	gtt. v.
Bismuth subnitrat.....	ʒj.
Lanolin.....	ʒij
Unguenti zinci oxidi.....	ʒj.

Internally the following:

R.—Liq. potassii arsenitis..... gtt. lxxij.
Tr. nucis vomicæ..... gtt. lxxij.
Aloes..... gr. ij.
Aquæ menthæ pip..... ʒijj.

M.—Sig. One teaspoonful after meals.

—*Shoemaker.*

In mitral regurgitation, before compensation fails, give such drugs as iron, quinine, and nux vomica to strengthen the heart-muscle.—*Anders.*

One-half or one-fourth drop doses of tr. nucis vomicæ are efficient in relieving the constipation of infancy.

—*Stewart.*

The best remedy to loosen expectoration is muriate of ammonium, combined with some such remedy as syrup of squills. If dry plastic pleurisy be present, iodide of ammonium should be added as follows:

R.—Ammonii muriat..... ʒiiss.
Syr. scillæ..... ʒij.
Ammonii iodidi..... ʒiiss.
Glycerinæ..... ʒss.
Syr. prun. Virg..... q. s. ad ʒiv.

M.—Sig. ʒj every three hours in water.

At the same time in a case of pleurisy, to prevent any possible tubercular tendency, give something to build up tissue and aid general strength; something to strengthen the chest. The best thing for this purpose is the syrup of the hypophosphites, ʒi three times a day after meals.—*Anders.*

For the albuminuria of pregnancy with convulsions, chloral gr. x with syrup of acacia, should be given, by the mouth, or ʒss to ʒj in water may be injected per rectum. If the remedy does not altogether remove the disease, its effect will last for one and one half hours, when the convulsions will return.

—*Stewart.*

Although lead may be found in the urine, it is not a certain sign of lead poisoning, as all the lead may be eliminated; neither is it certain, when lead is not found in the urine, that there is no lead poisoning, as it may be retained in the system.

The treatment of lead poisoning is iodide of potassium to act on the lead, and sulphate of magnesia to carry it off.—*Anders.*

PAINFUL SENSATIONS IN CARDIAC DISEASES.—The subject of dyspnoeal troubles of all kinds which attend cardiac affections have been carefully described and recorded by many authors, but the sensational pains experienced in valvular lesions have not been so fully registered, but of 483 cases within seven years treated at Nothnagel's clinic, only 127, or 26 per cent., experienced severe painful sensations. From each case he obtained a description of the feeling, the majority describing it as a "sticking," "tearing," "burning," or "boring" pain in the region of the heart. Others described it as "drawing the heart out," as if some one were striking it, or as if a foreign body were placed in the left side. He (Nothnagel) adds another observation to the objective disturbance in the sensibility; if a fold of the skin be lightly raised and pricked with a needle, or pressure applied into the intercostal spaces along the line of the intercostal nerve in the præcardial region, it will be found to be very sensitive, and often give great pain. In purely muscular diseases of the heart, as myocarditis, fatty heart, arterio-sclerotic, and idiopathic hypertrophy, the subjective sensations are so frequent that these alone may lead to a correct diagnosis of the case.—*Med. Press and Circular.*

TREATMENT IN 1,008 CASES OF SCARLATINA.—

In the large majority of cases no special treatment was indicated, symptoms being dealt with as they arose. In those with severe throat and glandular affection, frequent syringing out of the fauces and nares with a solution of chlorine or boracic acid was most useful as serving to clear away offensive secretions and lessen discomfort. In such cases the frequent application of hot fomentations was of great service. In restlessness and sustained pyrexia cold and tepid spongings were useful to promote sleep, and sulphonal in some instances proved a valuable hypnotic. The cases were treated in bright and well-ventilated wards, maintained at a temperature of 56° to 60° F., the average cubic space per bed being about 2,000 feet. The diet during the pyrexial stage consisted of milk, beef-tea, eggs, and ice, after which a more solid diet of milk-pudding, bread-and-butter, with fish or meat, was given, and at the same time baths were ordered on alternate days. Stimulants were only employed in severe cases, usually in the form of brandy or champagne. Uncomplicated cases were allowed to get up at the end of the third week, and, except in wet weather, sent out of doors for several hours usually each day, due care being taken that flannel was worn next the skin and the clothing otherwise warm and generally sufficient. Complications were dealt with as they arose, and, with the exception of otorrhœa, were rarely seen after the third week.

With reference to the treatment of scarlatinal nephritis, I am not in the habit of withholding eggs as an article of diet when the secretion of urine has become fairly established, especially if there be much loss of albumen and consequent anæmia. Although the employment of eggs would be condemned by many on theoretical grounds, I can only say that I have followed the practice for several years with the best results. Though milk should be the staple food, patients will more rapidly put on flesh, lose their albumen, and gain color if not withheld from a light solid diet, including boiled eggs. With the exception of perchloride of iron and the free use of purgatives, I am not in the habit of using drugs in ordinary cases. A death from scarlatinal nephritis is an event of the greatest rarity. In this series of over 1,000 cases of scarlatina only one death occurred from that cause, the child being admitted with nephritis, and dying a few days after in convulsions.

—*Caiger, in The Lancet.*

THE DANGER TO THE PHYSICIAN IN HIS WORK.—That the physicians tread in very close proximity to possible personal infection, was illustrated lately in the experience of Dr. Jas. F. Aris, of this city. The doctor's patient was an infant who was suffering from whooping-cough, and whom the doctor found greatly asphyxiated by the accumulation of mucus in the mouth and upper air passages. In removing this, the doctor's index fingers were slightly wounded at their matrices, by the teeth of the child. Cellulitis supervened in one finger, and at the end of two weeks had reached the elbow, and the general appearance of the member anything but pleasant. At the time of writing, though, five weeks from date of injury, we are happy to be able to state that the trouble has practically disappeared, only an infiltrated condition of the tissues about the matrix remaining.

A wound of the human teeth is one of the most dangerous of wounds.—*Toledo Reporter.*

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NATIONAL DRAINAGE.

AS the world becomes more densely populated, and the struggle for existence becomes more severe, many subjects are forced upon the attention of the public that have been previously overlooked. Although the wolf and the bear are no longer the foes most dreaded by man, health and strength are no less necessary than in the days of the cave-dweller. And as competition becomes more pressing, economies are necessitated that were unthought of in the royal profusion of the years of plenty.

Economic and hygienic considerations will unite in the near future to compel the public to take up the questions of drainage and of the purity of the water supply, as matters of pressing interest. It is certain that at present there is not a stream in the settled portions of the country that supplies water that can be drank with perfect security; and this because the water-courses are used to carry away countless millions of dollars' worth of the most valuable fertilizing material known. It is estimated that each person produces excreta and garbage annually to the value of \$50. The annual production of the whole country, at this rate, is worth \$3,250,000,000. Of this vast sum scarcely any is utilized; but, on the contrary, nearly all goes to contaminate the drinking-water.

In the last number of the *Asclepiad*, Benjamin Ward Richardson takes up the question of a national system of drainage. Dr. Richardson has long been known as an expert upon matters of hygiene, and has been called as such to decide questions, legal and otherwise, upon drainage. As the result of his study of this problem for over thirty years, he has presented the plan whose features we now lay before our readers. The system must be *national*, that each individual's good may not be obtained at the expense of another's bane. The city's sewage must not poison the air or water of the rural districts.

The first essential of a perfect system is the utilization of all sewage products.

The second is the separation of the sewage from storm water, the amount of water admitted to the sewers being the least possible for propulsion.

Thirdly, the sewage shall be removed from every dwelling and every town as rapidly as it is produced.

Fourthly, the sewage shall be conveyed so quickly and completely from habitations that no ventilating openings will be needed in the streets or houses.

Fifthly, an exhaust method should be in constant operation, for flushing the sewers with a down draught of air, as well as of water, whenever a closet or sink is opened.

Finally, the system shall be universally applicable, so simply that all communities can avail themselves of it at once; and shall be introduced as a necessary part of every design for new towns as laid out by the builder.

To accomplish these conditions, Dr. Richardson proposes to utilize the work already done by the railways. "The whole country is already surveyed, laid out, levelled and prepared for national drainage, by what has, with infinite toil, engineering skill and scientific design, been accomplished in the network of railways with which the country is everywhere intersected." All there remains to do is to construct along the sides of all railways a series of tunnels, in iron, terra cotta or brick; to let these conduits start wherever there are houses to be drained, and carry the sewage along the line. Other conduits tap these, and carry the contents to spots selected for their utilization, where they may be employed without offense.

This is the ground-work of his plan; the points of detail given are as follows: The levels are already prepared, and sites exist for the necessary constructions. The mains can be laid as easily as telegraph lines are run. No injury is done to the railway. It is surprising how small the conduits may be made; those in large towns being, perhaps, a few feet in diameter, and tapering down as smaller tubes are requisite; while in the country, for many miles the lines would cease altogether. In cities like London there would be so many starting-points that enormous sewers would not be needed; each main would drain its own district into the nearest outgoing line, and, as the contents would always be in brisk current out towards the open country, with a minimum of water to carry the solid material, the pipes, even in a vast city, would be extremely small. The sewage would also be carried in every possible direction; one hundred and fifty outlet stations could be placed within a radius of twenty miles of greater London, and, without any perceptible offense, supply the wealth that now, with perceptible offense, is cast into the sea.

The easy gradients of the railway lines would require pumping power of little cost for each inlet. The pumps would by exhaust draw the sewage from the town, and by the same stroke raise it to the required level. The main tube could be tapped at any point to draw off its contents for utilization; and in many places the distribution would require only the force

of gravity. Many barren spots are to be seen along the railways, that by this means could be transformed into fruitful fields.

Water power might also be utilized in some places for propelling the sewage. Wind mills form another available means of supplying power. Where none of these sources are available, the traction engine could be brought into service.

The results of a sewage system that protects the water-courses could not but be beneficial. To what an extent this is the case is shown by the history of the town of King's Lynn. In 1832 cholera passed around this town, attacking its neighbors. This history was repeated in 1849 and in 1854; although in the latter year the disease was actually brought into the town; but Lynn proved cholera proof. Yet the sewerage was very deficient; three open sewers forming a network, connected with the tidal streams. These were so large that bridges were built over them, and at low tide the boats lay stranded in the channels surrounded with every kind of abomination. The sewage only moved with the tide. "One of the worst-drained towns of the time." Nevertheless, it signally escaped the worst of the drain plagues, Asiatic cholera, because its water supply was pure.

Many practical advantages would result from the adoption of a national drainage system. Uniformity of supplies insures the minimum of cost. If the pipes prove too small, new lines could be laid without disturbing the first ones. Sewage not required at points convenient for supply could be converted into dry fertilizing material and sold in that form.

In discussing the organization for putting this plan into effect, Dr. Richardson suggests that the railroads are the best suited. They could take the plan up as a profitable undertaking. As they bring food from the country to the town, so the return of the sewage would complete the necessary circulation. "The whole engineering field lies open. Not one new instrument has to be invented; not one new line to be cut; not one tunnel to be made; not an acre, probably, of land to be bought, except for outlying distributing stations; while every form of power—steam, water, wind, electrical—can be rendered available."

This system may be termed an ideal one; embracing all the requirements of a perfect method of sewage disposal. It may be long before anything so perfect can be carried into practical effect; for the world moves slowly. But it does move, nevertheless; and the first essential to its mobility is that it should have an ideal towards which its motion may be directed. Meanwhile, in America, where the birth of new towns is a matter of almost daily occurrence, the subject is worthy of special attention. It is much less expensive to do a thing right in the first place, than to undo a faulty system to replace it with a good one.

RICHARDSON gives his voice decidedly against the theory that Jews are less disposed to cancer than other races; but thinks the former remarkably free from phthisis, though not entirely so.

Annotations.

CO-EDUCATION IN MEDICINE.

THE medical department of the University of Iowa is open to students of both sexes. The experience of this institution in co-education is thus described in *The Vis Medicatrix*, the new journal of the Iowa State Medical Society:

The first class, October 24, 1870, consisted of thirty-eight students, of which nine were ladies. The established rule of the University was, "all departments to be open to both sexes without distinction." The faculty generally were opposed to "mixed classes," and this was the feeling of most of the profession. Under the circumstances it was decided that no modification should be made in the matter of lectures, that all should listen to the same course. It was expected that this would discourage or drive away the women. When the time came for dissection the professor in charge formed a class of ladies and gave them a room by themselves. After the first evening they asked to be allowed to take their table into the common room, which was granted. The boys said the girls were afraid to stay alone with the corpse. An item went the rounds of all the papers in the country that in the Iowa Medical College classes of gentlemen and ladies dissected together in the common room, something never before done. This method of instruction was a solution of the whole question, and was never productive of any difficulty. It has since been followed in all the schools. Better order is preserved and better language used by professors and students; desirable improvements in every respect. About the same number of ladies have been in the class each year since. The degree of M.D. was conferred on three students, one being rejected. The class of the following year went up to one hundred and two, fourteen of which graduated. In the class of 1890-91 there were one hundred and fifty students, twenty-two received the degree, a less number than usual, as it was the first class of three-year graded men. Over fifty have passed the second year grade.

Letters to the Editor.

KITCHEN REMEDIES.

IF any physician wishes to leave the "Latin kitchen" as a storehouse of medical provision for extreme cases, he is nearly sure to find remedies for certain cases, out of the articles of every day's use. He will find that common herring, especially the roe, taken in the morning on an empty stomach, serves as a good expectorant. Grains of black pepper, taken in the morning (two or three pieces), for a certain time, often cure dyspepsia. The daily use of black prunes, cooked with sugar, serves as a good laxative. Common table salt is a good remedy in catarrh of the throat, as a gargle; for nervous headache, as a snuff (in powder); for the hair, as a tonic; it serves for rubbing those parts of the body that are afflicted by rheumatism; salt also stops pulmonary hemorrhage, and prevents epileptic fits. Hot tea is a good sudorific. Coffee excites circulation, is an antidote for morphine, and alleviates headache from drunkenness. Roasted and crushed coffee berries, when mixed with iodoform, destroy the odor of the latter; when not roasted, but crushed, eight or ten berries diminish fever; it destroys the odor of tobacco in the mouth, and the odor of onions. Lemon juice is a good remedy for rheumatism, destroys also bad taste in the mouth, is an anti-emetic, serves as a cosmetic for the face and hands, as a washing in sun-burns; as a medium of quieting great thirst; as a refreshing remedy in summer heat. Decoction of parsley is a good diuretic. Honey is a laxative; mixed with flour, *ad pasta*, serves to ripen abscesses. Potatoes applied

to the temples and forehead, in thin slices, alleviate headache and agreeably refresh. Soup made from onions is a stomachic tonic; (it also strengthens the breath.) The kernels of black olives increase the gastric juices and promote digestion. Celery acts on the nervous system. Garlic, cooked with milk, is a good remedy for pin-worms. Scraped horse-radish, or burnt feathers applied to the nose in fainting fits, serve as exciting agents; horse-radish can also replace mustard plasters, and acts even stronger than the latter. Sweet oil, and the yolk of an egg, serve as a dressing for burns. Abundant use of water-melon juice is a good diuretic. Bitter almonds quiet the palpitation cordis. A piece of soap, in the form of a cone, serves as a good suppository in constipation alvi. For colds of the feet, and as a prophylactic remedy for colds, put mustard powder in the stockings. Kerosene is a good remedy for rubbing in cases of any rheumatic pain. (I always mixed it with ammonia liquids and spiritus camphorata); kerosene is also a good washing for scabies. The soft part of an apple, cooked in red wine, and applied to piles, quiets the pain, etc.

S. SEILIKOVITCH.

338 SPRUCE STREET.

The Medical Digest.

SPECIFIC MEDICATION.

NEPETA CATARIA; pain in abdomen; flexing of thighs upon the abdomen; writhing of the patient; persistent crying; \mathfrak{zj} . water $\mathfrak{z}\text{iv}$.

GENTIANA.—Sense of depression referred to epigastric region, and associated with a sense of physical and mental weakness. One to five drops.

To practice specific medication successfully, we must take cognizance of the cause, pathology, the symptomatology, and treatment of disease.

GOSSYPIUM.—Delayed menses, with backache and sense of dragging in the pelvis; sense of fullness and weight in bladder, with difficult micturition. Gtt. x. to xx. , water $\mathfrak{z}\text{iv}$.

LEPTANDRIA.—Dull, heavy pain in right hypochondrium; fullness of abdomen; tongue coated markedly white, but not a fur; thirst, but cannot drink water; restless and cannot sleep. Leptandrin, gr. ss. to gr. j .

CHIONANTHUS.—Pain in epigastrium and right hypochondrium, simulating colic, sometimes extending to abdomen; intense pain in region of the liver, extending to umbilicus, with great prostration and sometimes nausea. Dose, two to ten drops.

APIOLIN is indicated in dysmenorrhœa of a spasmodic and congestive character, with violent headache; palpitation of the heart and great despondency; accompanied with excruciating pains during the flow. Dose 3 grains in capsules three times a day for a few days before the menstrual epoch.

MACROTYS; muscular pains; uterine pain with tenderness; false pains, irregular pains; rheumatism of the uterus; dysmenorrhœa. An anti rheumatic when the pulse is open, the pain paroxysmal, the skin not dry and constricted. Gtt. x. to xx. , water $\mathfrak{z}\text{iv}$.

The specific affinity of bryonia for serious membranes has become well known to every body. Indicated by pain of a tensive, cutting character in serous membranes; headache extending from forehead to occiput, right side; right cheek flushed; cough hacking, as from some irritating substance; rheumatic pain of a tensive, cutting character.

WHY does medicine act on certain parts and not on others? Medicine is simply floating about in the blood current, and why does it not act on all tissues alike? But it does not. Medicines have a special affinity for certain structures, and this is only in accordance with a general law of the economy. For instance the elements of ptyalin and pepsin are in the blood current as it flows through the body, but it is only in the salivary and gastric glands that these substances are elaborated. The cells of the gastric glands have a special affinity for pepsin; and so it is for all the glands, the cells of each have a special affinity for its particular secretion; and so it is that there are medicines also which have a special action upon certain parts in accordance with this law of cellular selection. And thus we have a scientific basis for specific medication.—*Eclectic Med. Jour.*

SENSE OF SMELL LOST BY THE USE OF COCAINE.—One of my patients, after suffering for some time from neuralgia, which seemed to radiate from the nose, applied to a physician for relief. He recommended a solution of cocaine to be snuffed up the nose several times daily. After using as directed for a couple of weeks, she was surprised one day to find that she had lost the sense of smell, which has never returned.—*Dental Cosmos*.

HYPERTROPHY OF BREASTS.—In the *Southern Practitioner* T. J. Crofford reports the case of a girl aged fifteen years, who had menstruated for about nine months. In that time her mammary glands had grown until they measured $32\frac{1}{2}$ and $35\frac{1}{2}$ inches in their greatest circumference. The breasts were removed; the skin being peeled off from the glands, and the latter enucleated. Very little hemorrhage resulted from the arteries at the base; the inference being that the organs received their nutriment mainly from the skin.

SYZYGIUM JAMBOLANUM IN DIABETES MELLITUS.—Lamaschen tried this in eight cases. In each, after large enough doses—5 to 10 drachms of the powder in twenty-four hours—for several days, the urine and sugar decreased in quantity within a few days, the thirst and other diabetic symptoms lessened, and the improvement remained for a time after discontinuing the treatment. But the sugar did not completely disappear in any case. The jambul caused no disagreeable effects, and, in fact, the patients generally increased in strength. He thinks the contradictory records of other clinicians must arise from their use of too small doses, or of inferior specimens.

INFECTED FLASKS.—In the course of his experiments with peroxide of hydrogen, Richardson noticed that sometimes the flask would continue to evolve oxygen from the peroxide solution, even after distilled water had been boiled in it. One flask retained this property for years. He explains this by supposing the glass to possess a certain degree of porosity; and in these pores the disturbing body is left in minute sub-division. (The flasks had contained black oxide of platinum.) "But simple as such an explanation may be, it carries with it a lesson. It shows that minute disturbing causes may be obscurely laid by, and, under favoring conditions, show an activity as strange as those mysterious phenomena called vital and hereditary."—*The Asclepiad*.

STOMACHIC TOOTHACHE.—In *The Asclepiad*, Richardson speaks of a form of toothache associated with dyspepsia, flatulency, much uneasiness, no acute abdominal pain, but with irritability of the bladder and the passage of pale urine. Eructations of gas and acid liquids are followed by immediate cessation of the toothache. From the fact that the application of alkali to the tooth will sometimes relieve the ache, gives some support to the theory of an acid irritant as the cause. But the sudden relief on eructation shows the pain to be reflex, from local irritation of the nerves of the stomach. He advises the application of soda to the tooth, followed by carbolic acid, with bicarbonate of potassa, a brisk mercurial purge, Turkish bath, and vigorous out-door exercise.

EFFECTS OF MASTURBATION.—I. Dementia and general paresis are the only forms of insanity which can ever be attributed to masturbation.

2. A very small percentage of dementias are so caused.

3. In cases which are so caused, the result is due rather to the excess in venery than to the manner of its performance.

4. Excessive masturbation is more frequent among insane females than males.

5th, and finally. The habit, if carried to excess, is a symptom of diminishing moral resistance, and is apt to arise after any serious mental disturbance.

—Brady, *Va. Med. Monthly*.

POST HOC AUT PROPTER HOC.—There appeared one morning in my consulting room an old patient, a physically weak man, complaining of a severe chill, pain in the right lung, cough, and difficult breathing. I discovered a considerable area of fine crepitation, sharp friction rub, rendering the breathing very painful from "stitch;" in short, all the signs of bronchopneumonia, passing into the second stage, with pleurisy. The temperature was but one degree above normal. He said he had been much more feverish, but he had "walked it off." The day was one of the bleakest and coldest of the season, but this was not a man who would lay up. I prescribed as best I could, and put round his chest a flannel bandage. Three days later he reappeared, still ailing, but improving. He had lived as usual, not working, when he felt feverish and oppressed he walked these symptoms off. In ten days he recovered entirely.

—B. W. Richardson, *The Asclepiad*.

SCIATICA.—Correct the defective secretion of the liver, and your sciatica, neuralgia, and malaria is removed and health restored. This is no whim of my own, but it has been demonstrated weekly in my practice for over twenty years.

Mercury in any form will aggravate this condition, and should not be given—even if the stools are of a gray color—if you desire a permanent and speedy cure.

Some variation of the following formula I find of great value, and if the stools are dark or green a cure will soon follow its careful use:

R.—Fl. ext. euonymus,	{ Parke, Davis & Co.
" chelidonium,	
" chionanthus,	
" berberis vulg.....āā 3iij.	
" podophyllum..... 5ijss-3iij.	
" nux vomica..... 5j.	
Glycerine, q. s..... 5vj.	

M.—Sig. Teaspoonful in water one-half hour before meals and on retiring.

—Hale, *Med. Summary*.

CHLOROFORM ACCIDENTS.—Reviewing these cases briefly we find:

In none of them did the pulse or countenance give the slightest warning of approaching danger.

The first intimation of danger was the sudden cessation of respiration.

Even after the cessation of respiration the pulse, for several minutes, was almost normal.

The lesson we shall draw from these, and a number of other cases:

That under all of the most favorable circumstances, chloroform has its dangers which may become suddenly manifested without warning.

That it should be carefully watched in all cases where the patient is fearful of an accident.

That it should *not* be administered to persons who breathe it in a halting, hesitating manner.

That in all prolonged operations ether, or a mixture of ether and chloroform, or chloroform, ether and alcohol should be preferred.

Finally that no one should ever administer this agent to complete anæsthesia, unless he has at hand all agencies for combatting the possible dangerous conditions that may arise at any moment.

—Bryce, *South. Med. Clinic*.

TREATMENT OF INFLUENZA.—The treatment by medicinal means has been hitherto an utter confusion. I have met with two or three of my brethren who believed firmly that the expectant treatment, with careful regimen and hygiene, was by far the best and soundest. Amongst those who believed in drugs there was no such unanimity. One was for quinine from first to last; another thought well of antipyrine; a third had "cured" all his cases with salicylate of soda, under the not altogether bad idea of a rheumatic element; a fourth inclined to the salines, especially chlorate of potash; a fifth considered aconite, "in guarded doses," the beau ideal measure, especially when the fever was high. These "flying opinions" were sure tokens that there is no principle at the bottom; of a wandering knowledge which would be considered wool-gathering if applied to the consideration of the best anæsthetic. This confusion will remain until we arrive at the cause. In my experiments I found the speediest relief from inhaling ammonia vapor; that directly negated the irritant effect of the ozone, and removed the headache. But when the nervous disturbance is established, this is ineffective. Wanted: a method for restoring the normal tension of the organic nervous system. That is all, and that is cure. The successful remedy when found will not be an alcoholic stimulant. According to my observation, alcohol has added largely to the dangers of influenza.—Richardson, *The Asclepiad*.

ELECTRICITY IN HEMORRHOIDS.—My usual method is to place one pole on the sacrum and the other directly on the pile or over the mass, if there is more than one. If the extrusion of the tumors is too painful, then I apply the current to the rectum by a suitable electrode, well insulated, all but the distal, three inches. The strength is that which is well borne, but as much as possible; and it is important that defecation has been practised prior to the séance, for you are apt to get unlooked-for results otherwise. Don't forget this, and always when working with piles, or trying to reduce protrusion of any sort at the anal orifice, stand aside, for tenesmus has no etiquette, and apologies on the part of the performer are rather irritating than otherwise, sometimes. This happened to a friend only a few days

ago (I mean he knows what I mean now, and the more the man talked the hotter the doctor got); look out, therefore.

Galvanism, of course, relieves the tormina which is so distressing, but faradism appears to be the more efficient as an actual curative. I, therefore, suggest a full trial by those who have a coil giving a steady current. Let the sitting be at least ten or fifteen minutes long, and bathe the parts with hot water before and after the treatment. I have not written anything for the *Bulletin* for a long time, and, as many of its readers in the long ago used to pretend that they enjoyed my papers (but their great politeness may mask their real opinions), I venture to try their patience again, with the hope that some of them may possibly have something to say themselves on this topic. If any of them has any experience in this direction, I would be glad to know it through the columns of this estimable journal.

—Blackwood, *Med. Bulletin*.

ABSCESSSES OF THE HIP.—

VARIETY.	COURSE.	EXIT.
1. Arthritic ..	a. Through inner side of capsule.	Inner side of thigh among abductors.
	b. Through anterior and inner side of capsule.	Enters sheath of psoas and iliacus, and burrows to inner side of thigh.
	c. Through posterior part of capsule.	Along course of external rotators or below gluteus maximus.
2. Femoral ..	a. Directly into joint.	As in arthritic variety upon outer or anterior aspect of thigh below the trochanter.
	b. Outer or anterior course.	
3. Acetabular	a. Through anterior part of capsule.	In inguinal region below Poupart's ligature.
	b. Perforates acetabulum :	
	1. Through internal obturator muscle.	As gluteal abscess.
	2. Fills internal iliac fossa.	As pubic abscess.
	3. Perforate external obturator muscle.	As internal crural abscess.
	4. Into peritoneal cavity.	Into rectum, urethra, bladder, vagina, and at verge of anus.

Young, *Med. Age*.

KOCH'S TUBERCULIN.—This treatment, though disappointing on the whole, still finds many adherents who laud its efficacy. Dr. Nourney relates fifty cases which he has treated, and is pleased to assure us that Koch's injection is the best treatment yet on record for the treatment of phthisis pulmonalis. The failures that have occurred in the hands of other men he attributes to the unsuitable dose. In a long argument he attempts to prove that the injections increase, strengthen and improve (1) the maintaining of the body temperature, (2) hyperæmia with secretion, (3) formation with new blood-vessels, (4) general feeling of renewed vigor. He concludes by speaking

confidently in favor of tuberculin, and disparages Liebreich's cantharidin treatment.

Dr. Augustus Ladendorf follows this with a jeremiad from the results of Koch's tuberculin. He philosophically endeavors to analyze the cause of death, and finally resolves on two primary factors—the general reaction and the local reaction. The former usually terminates fatally through heart failure; but hitherto this mode of death has been very imperfectly described, notwithstanding Oppenheim's hypothesis that the phenomena resembles organic poisoning. He condemns large doses, or hurrying the destruction of morbid tissues, which may be thrown suddenly into the circulation, producing thrombosis, or into the bronchi and impede respiration. This danger must have been observed by those carefully watching the changes in a lung cavity where no injections have been given. Around the space, areas of dull patches will arise, presumably from matter forced by coughing from the cavity into the surrounding narrow channels, where it forms a plug. The dose would be an important factor in his treatment; it should never rise to 80 milligrammes; two to three twice a week would be enough. He is quite opposed to keeping a patient confined to bed during the treatment. Plenty of fresh air winter and summer is his motto. Climbing hills and good long walks to expand the lungs during treatment are highly recommended. Tuberculin is inefficacious if not combined with high elevations or mountainous climates.—*Med. Press*.

ANTEVERSION OF THE UTERUS.—A married woman, forty-four years of age, the mother of eight children, the last one being born seven years ago. She complains of pains in the back, over the lower part of the abdomen, and headache. She also has some constipation.

When she was here before she was fitted with a pessary which she is at the present time wearing. By bimanual palpation, you can see that the uterus is retained in its normal position in the pelvis. It had been slightly anteverted, and I have asked her to come to the clinic to-day, because it is a rule I have made and found useful in practice, to have a patient who wears a pessary for malposition of the uterus present herself at the clinic within a week or so, in order that I may be able to ascertain, while the woman is performing her daily avocations, whether the pessary is still retained in its proper position in the vaginal canal. If, in the course of a week, it is found in its proper position, it is safe to conclude that it will remain so for a considerable length of time afterwards. Then the woman can go about for a period of three months, at least, without the necessity of an examination, taking daily douches, and at the end of that time, she can come back and have it again introduced. The pessary used for displacement of the uterus should never be so inserted as not to be freely movable in the vaginal canal.

There is one point I would call your attention to in this connection, and that is, never advise a woman who is wearing a pessary to use alum, in solution, as an injection. This is a drug recommended by a good many physicians, but it has, in my experience, produced very serious results. The use of alum in this way is absolutely certain to encrust the pessary sooner or later, and, as a result, you get irritation and perhaps excoriation of the vaginal mucous membrane, producing at first a serous and then a bloody discharge from the vagina.

—Mundé, *Int. Jour. Surgery*.

RETENTION OF URIC ACID.—A gentleman, who had suffered from chronic malaria, had an enormously enlarged spleen. That organ began to contract, and simultaneously the patient began to suffer from repeated attacks of renal colic, due to small uric acid calculi, at intervals of two or three weeks. So frequent were these attacks that I thought he must have an accumulation of small stones in his kidneys, for I did not fancy he could form the concretions sufficiently rapidly to cause such frequent recurrence of the renal colic. Post mortem examination, however, showed that I was mistaken, for there was no calculus whatever in either kidney. Retention of uric acid in the spleen, according to Dr. Haig, is accompanied by its absence from the blood, and consequently by a feeling of well-being and jollity, which may, however, pass into an entirely opposite condition when the uric acid, which has been stored up during the period of retention again finds its way into the circulation. Thus, while a glass or two of champagne, by increasing acidity, drives the uric acid out of the blood and consequently give rise to hilarity and happiness in the person who had taken it, it will give a gouty man twinges in his joints, by causing the uric acid to lodge in them, and may cause much subsequent headache and depression when its first stimulant effect has passed off and the imprisoned uric acid again enters the circulation. Even more serious consequences than depression and discomfort may, according to Dr. Haig, be produced by the rapid removal of uric acid from its chief dustbin or storage place—viz., the spleen—into the circulating blood; for, instead of only affecting the mental faculties, it may attack the heart, with fatal results. As an instance, he gives the death of the late Canon Liddon, who had recovered from an attack of gout in the head, and was feeling fairly well, even after the fatigue of a railway journey, but suddenly fainted shortly after breakfast, and died. Dr. Haig's explanation of this is that during the period of comparative well-being the uric acid had been stored up, and when the blood became more alkaline, as it does during digestion, and dissolved a part of it out, the liberated uric acid contracted the arterioles, thus raising the tension so that the heart was unable to overcome it, and causing fatal syncope.

—Lauder Brunton, *Lancet*.

TREATMENT OF SEVERE VOMITING OF PREGNANCY.—At the Harveian Society, Dr. Amand Routh read a paper on this subject. After alluding to the difference between the vomiting of pregnancy and the vomiting *in* pregnancy, he noted the anxiety occasioned by severe forms of this condition, and the advantage of having an easy and efficacious mode of treatment in itself free from risk. Although it was now generally held to be reflex, and due to some local irritation at or near the os uteri internum, great difference of opinion existed as to the exact pathology and as to how it was produced. The author did not think the vomiting was often secondary to displacement or incarceration, and showed that it occurred where no malposition existed, and that, even when vomiting occurred with misplacement, replacement did not cure it. The treatment by drugs, accessory measures, replacement, Copeman's dilatation, local applications of cocaine, counter-irritation, etc., was reviewed, and it was shown by several cases that painting the cervix and the end of its canal with iodine paint (equal parts of iodine, iodide of potassium, spirits of wine, and water) had, in the author's hands, never once failed in the last seven

years at once to stop the sickness, which might, however, begin to return from the fifth to the fifteenth day, when it was almost certainly permanently arrested by a second application. A prompt use of this remedy in cases threatening to become urgent would prevent the occurrence of the so-called "uncontrollable" or pernicious vomiting, which differed only in degree, and not in kind, from the milder forms. Induction of abortion would still be required when the vomiting was due to the presence *in utero* of a foreign body, such as a dead foetus or a hydatid or fleshy mole, but might otherwise, by this proposed remedy, be avoided.

The President, commenting on the many forms of treatment for severe vomiting in pregnancy, asked whether any of Dr. Routh's cases had albuminuria and eclampsia?

Dr. Phillips remarked that the only objection to the injection of cocaine, was that the speculum had to be used. Retroflexion and impaction were not, in his experience, causal of this form of vomiting; it was prevalent amongst the upper classes rather than amongst hospital patients. Vomiting from hepatic causes was often concurrent with pregnancy.

Mr. Huxley regarded the mechanical theory as insufficient to explain several of his own cases, which had been successfully treated by Hegar's method of dilatation.

Mr. Roughton alluded to two cases in which artificial labor had been induced.

Dr. Routh, in replying, repeated that the method he advocated had never failed in his hands during the last seven years.—*Brit. Med. Jour.*

THE MODERN TREATMENT OF SYPHILIS.—Acting upon the general knowledge that if carefully used mercury scarcely every does harm, and that it often in chronic maladies, whether syphilitic or not, acts beneficially, I have, in common I suppose with many others, for long been in the habit of prescribing mercury in cases of ataxia. Very frequently patients appear to be greatly benefited by it; more especially the severity of the pains and the tendency to gastric crises appear to be mitigated. I must confess, however, that I have never had in any single case anything which might be vaunted as a cure. If I were to quote the cases in which white atrophy of the optic nerves has occurred as a complication, I am afraid I should be obliged to confess that they have all advanced to blindness in spite of the remedy. It has not, however, been so in those cases in which ophthalmoplegia externa or paralysis of single muscles of the eyeball have been the complicating conditions. In nearly all these great benefit has appeared to result from the long-continued use of specifics. In these latter, the iodide of potassium as well as mercury is often very beneficial, whereas in locomotor ataxia itself I think I have often seen it prove definitely prejudicial, depressing the patient's vigor and making him feel low-spirited and miserable, without in any way mitigating his symptoms. In general paralysis of the insane, if there is a history of syphilitic antecedents, I would never omit the long-continued use of mercury. I have seen great benefit from its employment, and when we remember that its most common pathological condition is adhesion of the pia matter to the gray matter of the convolutions (implying the existence of a low form of inflammation), we may easily believe that if not required as a specific mercury may still very possibly be of use. It should be given as a long course of small doses.

I have not as yet adverted to the treatment of syphilis in its inherited forms. In infants, inunction is easily practised in a variety of ways, and is usually very effectual. I have also found a solution of the bichloride, in small doses, a very efficient remedy, and not so liable to purge as the gray powder. If there is any evidence of bone disease, the iodide of potassium should be combined with it. If the symptoms are severe, and especially if the viscera are involved, infantile syphilis is undoubtedly a dangerous disease, and apt to terminate fatally by marasmus or convulsions. If, however, the specific is well borne, and the child passes favorably through the secondary stage, then I think there is, as a rule, very little danger of relapse; and a condition of good health may be expected until at a later period, say eight to fifteen years of age, the liability to keratitis, deafness, phagedænic affections of the throat, etc., may come on. These late manifestations of inherited taint occupy in reference to treatment a most exceptional position. Although we always prescribe specifics, they seldom or never appear to exercise any definite power. Keratitis will often run its course apparently almost uninfluenced, or the second eye may be attacked while the patient is under the remedies employed for the cure of the first. As regards the deafness, unless the remedies are used in its very earliest stage, I fear they very seldom prove of any value. It is certainly to be strongly urged in reference to both the deafness and the keratitis that mercury and iodides should be prescribed promptly and liberally, but we must be prepared to encounter much disappointment and to forego all hope of the rapid cures which the same remedies often effect in other conditions. It may be well that we should remember, in reference to this class of maladies, that they occur in those in whom probably the syphilitic virus has long ceased to be active, and who would be quite incapable of conveying the disease by contagion. They are tissue maladies, not the result of existing blood-poisoning. Hence, probably, in part, the impotence of mercury to manifest its specific power. There is no microbe left for it to kill.

—Jonathan Hutchinson, in *The Practitioner*.

SEELIGMÜLLER ON WORK AND REST.—Excessive, exhausting, and too long-continued work, insufficient or irrational recreation, and deprivation of the right amount of sleep are some of the main causes for the increase of nerve troubles in our day. The competition in all the professions and callings is so great that for every person whose powers fail, ten are ready with fresh strength to perform the same or greater labor for the same or even a smaller remuneration. All exciting and weakening amusements should be done away with, and the quiet joys of family intercourse, the conversation of intimate friends, and sociable walks in the fields and woods should take the place of brilliant evening assemblies. Then every person should pursue some agreeable occupation besides his regular profession, and in the latter he ought to have frequent hours of relaxation to relieve the strain. Mental application, even for healthy, adult persons, ought not to be continued more than three or four hours at a time, and night work it would be best to avoid altogether, as the excitement is apt to interfere with sleep. All who follow intellectual pursuits ought to have several weeks of complete rest at least once a year. Sleep is, however, the principal agent of recuperation. The amount of sleep needed is different for different persons. For the ordinary

worker from six to eight hours is absolutely necessary; yet how often, in the battle for existence in our time, is the desire for sleep forcibly suppressed and the night's rest improperly shortened. Sooner or later insomnia wreaks its vengeance on the offender. Many a person who once robbed himself of the necessary amount of sleep would gladly sleep now, but cannot. I do not hesitate to say that nerve troubles first develop into disease when joined with sleeplessness. It appears as a later symptom of a long-standing nervous disturbance, but to the lay minds it appears at the first signs of disorder, and is frequently taken to be the cause. The worker of the nineteenth century works beyond his strength, and in order to keep it up he resorts to stimulants—coffee, tea, spices, alcohol, tobacco. These produce a super-excitation of the nerves, which brings in its train insomnia; and to overcome this he resorts to narcotics.

The life of many of our contemporaries consists in taking artificial stimulants to enable them to perform their work, and then resorting to powerful narcotics that can counteract the artificial stimulation and produce rest and sleep. Any one can see that this alternation of stimulation and depression at least once every twenty-four hours must weaken the nervous system. Coffee is a powerful stimulant for the heart, and, therefore, those who suffer from palpitation, from hysterical conditions, or from insomnia should avoid its use. Tea in day time acts more mildly on most people, but taken evenings, it drives away sleep. The spices are less active nerve stimulants; yet pepper, especially, and some of the others affect the nerves of the digestive organs powerfully, and their liberal use in modern cookery has something to do with the epidemic insomnia. Of the injurious, the actually destructive effects of alcohol taken in excess little need be said. We physicians are not a little to blame in that we insist on giving large quantities of alcohol in fevers and conditions of exhaustion, not to speak of the methods used to cure the morphine habit, until patients often acquire the drinking habit. The evil results of the abuse of alcohol are not often apparent. Long before *delirium tremens* or other serious brain diseases appear, they are preceded by manifold nervous disturbances, the real cause of which is not often understood. I have frequently found that rheumatic pains, that were ascribed to a cold, were nothing but alcohol-neuritis, a mild form of inflammation of the nerves resulting from the use of alcohol, which disappeared when the practice was given up, only to return with the slightest repetition of the indulgence. Most habitual drinkers, and some of them very early, are subject to changes in the vascular organs, such as fatty degeneration of the heart and arterio-sclerosis, which lead to grave affections of the nervous system, like apoplexy and softening of the brain. Finally it may be taken as proven that the children of drunkards, if they are not carried off prematurely by brain troubles, are frequently afflicted with serious nervous ailments, such as epilepsy, idiocy, and the like. Tobacco has come to be in our time a national poison in many countries, and most especially in Germany. As sequels of chronic nicotine intoxication may be noted without fear of contradiction; palpitation and weakness of the heart; irregularity of the pulse of which heart-pang or *angina pectoris* is an acute symptom; general nervous debility; tremulousness; disturbances of vision, even to the point of blindness; and hypochondriacal depression even to the degree of melancholia. The fear-inspiring intermission of the pulse is a frequent cause of inveterate insomnia. That the children of heavy

smokers suffer with uncommon frequency from nervous diseases is an established fact.

And now for the narcotics, at the head of which stands morphine. The great danger of falling into the habitual use of this drug arises from the cowardice and degeneracy of our time. No one will suffer pain, no matter how slight or transitory. Not a tooth can be drawn, nor a child born into the world without the use of an anodyne, and when death comes we must have euthanasia. It is said that many physicians lend their hand too willingly and are ready with the injecting needle to check a pain that could easily be borne, not reflecting that it is immoral to encourage effeminacy and a dangerous thing to plant the germ of the morphine habit, a terrible passion leads inevitably to physical and spiritual debility and to death. The same is true of the constantly increasing cocaineism and hasheesh intoxication. Our generation demands above everything narcotics to produce the sleep that first we drive from us, and afterward so fondly desire; opium, morphine, chloral, bromide of sodium, paraldehyde, hydrate of amyl, urethan, sulfonal, hypon, somnal, and whatever are all their names—one would think names would soon give out, so fast are these children born. But how can we sleep without resorting to soporifics? Just as the life of the soul during the day is reflected in dreams, so the conditions of sleep are determined by all that we do when awake. The chief rule is to so act waking that you can sleep. Begin by accustoming yourself to do without excitants. Many a case of sleeplessness I have seen yield, when all other means failed, to restricting, or totally abandoning for a time, the use of spirituous drinks, coffee, tea, and tobacco.—*Literary Digest.*

Medical News and Miscellany.

Dr. H. H. MIDDELKAMP, of Warrenton, Mo., has received the honorary degree of Master of Arts, from Central Wesleyan College.

DR. J. R. BRIGGS, editor of the *Texas Health Journal*, has been expelled from the Texas State Medical Association. He forgot that a physician should always be a gentleman.—*K. C. Med. Index.*

THE Chicago doctor who reopened a wound for a patient, who did not pay for having it sewed up, has been discharged from custody. The justice deciding that the bistoury is not a deadly weapon.

DR. THOMAS LINN, who will be remembered as the Paris correspondent of *The Philadelphia Medical Times*, has issued a pamphlet upon the climate of Nice and the Riviera. In it he details the necessary precautions to be taken to obtain the most benefit from a sojourn at this charming resort. Dr. Linn has located at Nice, and this will be an additional incentive to Americans to winter there. We presume the booklet can be obtained on application to the author.

DR. P. C. REMONDINO has written a medico-climatic novel, in which matters hygienical, quackical, climatical and social are fully considered. It is entitled, "Opposite Climates; or, The Adventures of John Henry Smith from the Cradle to his Nuptials." The story is appearing as a serial in the *Richfield News*, published in Utica, New York, a periodical devoted to summer and winter resorts and watering places. When the serial closes it will be published in book form.

DEATHS in New York State, in May, numbered 10,213. The highest rate of mortality was in Port Jervis, being 36.06; the deaths from zymotic diseases being 31 per cent. of the whole number. The lowest rate was in Ellenville, where one death occurred out of 3,000, equal to 4 per 1,000 per annum.

THE American Society of Microscopists, now in the thirteenth year of its existence, will hold its fourteenth annual meeting in Washington, D. C., August 10, and continue in session five days. Its roll of active members contains about three hundred and fifty names, embracing very nearly every person in the United States who is at all prominent as a microscopist.

THE Kentucky School of Medicine graduated a class of 155, on June 18. In the course of his remarks Dr. Wathem stated that Louisville had more medical students than any American city except New York. The classes of the Louisville colleges number from 1,200 to 1,400. The first honor of the class, consisting of the Dudley medal, was awarded to Dr. E. P. Miller, of Indiana.

Now comes Prof. Wiggins with a new weather theory, submitting that telephone wires and wire fences are the cause of drought. They get in the way of rain clouds and break them all up. It would seem to the common mind that any rain cloud that got so low down as a barb-wire fence ought to be able to sink a few feet lower and go under. May be Prof. Wiggins has not reflected that wire fences over half a mile high are very unusual.

WEEKLY Report of Interments in Philadelphia, from June 27 to July 4, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess.....			2	Fever, typhoid.....		8	4
Anemia.....			1	Hemorrhage.....		3	
Alcoholism.....	2	56		Inanition.....			16
Apoplexy.....				Inflammation bladder.....		1	1
Bright's disease.....				" " brain.....		1	10
Burns and scalds.....	9	1		" " bronchi.....			
Cancer.....				" " kidneys.....		2	1
Casualties.....				" " liver.....		2	1
Cerebro-spinal meningitis.....			10	" " lungs.....		12	15
Congestion of the brain.....			1	" " heart.....		4	
" " lungs.....			7	" " peritoneum.....		4	2
Child birth.....			4	" " s. & bowels.....		4	6
Cholera infantum.....			13	Insanity.....			
Cholera morbus.....			1	Intussusception.....		1	
Cirrhosis of the liver.....			1	Jaundice.....		1	
Consumption of the lungs.....			39	Marasmus.....			29
" " bowels.....			1	Neuralgia of the heart.....		1	
Convulsions.....			2	Obstruction of the bowels.....		2	
Croup.....			13	Old age.....		14	
Cyanosis.....			4	Paralysis.....		6	1
Debility.....			2	Pyæmia.....		1	
Diabetes.....			1	Rheumatism.....		1	1
Diarrhœa.....			1	Septicæmia.....		2	
Diphtheria.....			7	Softening of the brain.....		1	1
Disease of the heart.....			17	Shock, surgical.....		1	
" " kidneys.....			1	Suicide.....		2	
" " liver.....			1	Syphilis.....			1
Drowned.....			3	Teething.....			3
Dropsy.....			3	Tumor.....		1	
Dysentery.....			3	Ulceration of the stomach.....		1	
Embolism.....			1	Uræmia.....		8	1
Fatty degeneration of the heart.....			2	Whooping cough.....			3
Fever, puerperal.....			1	Total.....		195	257
" scarlet.....			5				

TO CONTRIBUTORS AND CORRESPONDENTS.

ALL articles to be published under the head of original matter must be contributed to this journal alone, to insure their acceptance; each article must be accompanied by a note stating the conditions under which the author desires its insertion, and whether he wishes any reprints of the same. Letters and communications, whether intended for publication or not, must contain the writer's name and address, not necessarily for publication, however. Letters asking for information will be answered privately or through the columns of the journal, according to their nature and the wish of the writers. The secretaries of the various medical societies will confer a favor by sending us the dates of meetings, orders of exercises, and other matters of special interest connected therewith. Notifications, news, clippings, and marked newspaper items, relating to medical matters, personal, scientific, or public, will be thankfully received and published as space allows. Address all communications to 1725 Arch Street.

The Times and Register.

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THE INTERNAL USE OF THE SIMPLE ASTRINGENTS.

By SAMUEL WOLFE, M.D.,
PHILADELPHIA.

UNDER the above caption, THE TIMES AND REGISTER, of May 30, 1891, quotes from an article by Dr. W. A. Walker, in the *Boston Medical and Surgical Journal*. It is claimed that for the purpose of controlling hemorrhage, or decreasing the supply of blood to a part, this method of using these agents is not available. The theoretical basis for this argument is that the action of these agents is on the circulatory channels, causing their contraction and thus diminishing their calibre, while the action of the heart is unaffected. The result is claimed to be, the same amount of blood poured into the vessels at each contraction, and with equal frequency, and hence an increase in tension and in the velocity of the current. The same amount of blood would therefore flow through the vessels of diminished size, as before the contraction, owing to the increased swiftness of the flow.

Without taking the position that our therapeutic resources in the control of hemorrhage are limited to the administration of pure astringents, and without regarding them as invariably indicated in this condition, the possibility of frequent indications for their use, as well as their well-grounded claim in medical experience to decided value, can, I contend, not be successfully denied.

Besides the teaching of experience, the conclusions of Dr. Walker may be refuted on purely theoretical grounds.

Hemorrhage from an open vessel ceases, when the blood becomes clotted sufficiently firm in the wound, when the vessel has shrunken and contracted to such an extent and in such a manner as to close the opening, when the force of the circulation has become so far weakened as to be incapable of forcing the blood into or through the vessel. One or all of these means may operate. Were the latter alone operative, hem-

orrhage would cease alone with death or syncope, and in the latter event, would return with removal of this condition. I need hardly mention, that the extent and size of both the wound and the blood loss will be likely to determine the combination of the means of control; the preponderance of any one over the others.

It may be at once assumed that the astringents operate to favor the firm coagulation of the blood and the closure of the vessel, and I believe that a certain amount of control of the circulation, too, may be expected from them. They cause constriction of all the tissues; and this broad statement will include both the heart and the blood, which Dr. Walker seems to have excluded.

It is permissible to regard the blood as a tissue, looking on the blood plasma as a fluid matrix with the cells arranged according to a more or less well-defined plan. It is safe to assume that the solidity, so to speak, of the blood may be increased within limits short of actual coagulation by means of astringents circulating with it. How such a condition would act in favoring the control of hemorrhage, will hardly need explanation.

The diastole of the heart is largely due to the fact that the intra-thoracic pressure is less than the pressure of the atmosphere, which permits the heart to exercise a powerful suction in the intervals of muscular contraction. The more lax the fibres, the greater will be this expansion, and the greater, consequently, will be the capacity of its chambers, and, beating at the same rate, the larger will be the volume of blood propelled within a given time. Increase in the firmness of the fibres will then operate in lessening the amount of blood flowing through the heart, and, consequently, conduce to the control of hemorrhage.

The following conclusions may be drawn:

1. Astringents increase the coagulability of the blood in the wound.
2. They increase the consistency of the whole mass, and favor, thus, diminution of pressure in the small arteries.
3. They increase the contractile power of the vessel at the point of rupture.

4. They diminish the expansibility of the entire arterial system and of the heart, and hence their capacity and the volume of blood moving through them.

1624 DIAMOND STREET.

HYPEREMESIS GRAVIDARUM.¹

BY WM. A. DICKEY, A.B., M.D.,

TIFFIN, OHIO.

Professor of Diseases of Children and Hygiene, Toledo Medical College.

THE achievements wrought in the domain of surgery during the past few years have so much engrossed the minds of a great part of the profession as to almost completely overshadow the multiplicity of wants of the busy practitioner. There are few of us, I take it, whose work is so entirely surgical as not to find interest and instruction in the consideration and discussion of questions that come under the notice of that greater number of the profession—the general practitioner. His work, though less ostentatious, is equally as important, and his daily duties bring him in contact with cases of greatest gravity, requiring not only careful discernment, but intelligent, well directed judgment. Possibly in no one line of professional work are these cases so frequently met with as in obstetric practice. This is a fruitful field for observation and investigation, and one much neglected. There are many points that are yet obscure, and upon which, as a result, there is far from unanimity of opinion. This is eminently true of the subject of this paper. It is with the hope of bringing about a full and free discussion of the points involved in those cases of incoercible vomiting in pregnancy, which, in spite of the fact that the whole gamut of medicinal remedies and gynecological means are used, go on from bad to worse until the life of the prospective mother is threatened. Are there any therapeutic agencies on which we can rely, when, and by what means, if at all, shall we terminate pregnancy? These are all fruitful themes for discussion, and, except on the first, I fear we shall not agree. On the threshold of the discussion we are confronted with the question, what is “hyperæmesis gravidarum?” Probably we can better answer this by telling what it is not. Those cases of obstinate vomiting in pregnancy which can be controlled by therapeutic means, or by the correcting of co-existing maladies which operate reflexly, and in this way start a train of nervous phenomena, ending in vomiting, would not be classed as “uncontrollable.” Dubois defines uncontrollable vomiting thus: “The vomiting of pregnancy is uncontrollable when it affects seriously the health of the woman and resists the judicious use of a certain number of remedies.” A more satisfactory definition would be one in which not only the health, but the life of the woman was threatened.

The health of the patient might for the time be seriously affected, and yet the case not terminate disastrously. This fact should not be forgotten. There are those who believe uncontrollable vomiting to be a very rare occurrence. Compared with the great number that can be controlled, this is true; but when we reflect on the number of deaths that occur from pernicious vomiting we can no longer close our eyes to the danger arising from this distressing malady. Dubois, within a period of thirteen years, met with twenty fatal cases. Gueniot, in a collection

of one hundred and eighteen cases, reports forty-six deaths. Joulins gives one hundred and twenty-one cases, with forty-nine deaths. This number is now very greatly increased, so that if an equal number of deaths were to occur from any other cause the subject would long ago have been thoroughly studied, and better and more decided ideas entertained concerning it, and the best and safest means of relief.

In many of these cases the paroxysms of vomiting occur with wonderful frequency. Anything taken into the stomach, whether liquid or solid, is sufficient to excite vomiting. In some of them, even when the stomach is empty, the retching will continue. The patient soon refuses food, and the emaciation is rapid and profound, the woman in a few days being reduced to a mere shadow of her former self. Even if the paroxysms should cease for a time, they seem to return with renewed energy and vigor. This of itself will often bring on abortion—a state of affairs much to be wished for, as we then get rid of the primeval cause of the trouble. The vomiting will often come on soon after conception (as in the case to be given later), and continue until abortion is produced, when the vomiting will cease; then, again, it will not assume a serious aspect until the latter months of gestation.

Dr. Graily Hewitt, of London, in a brochure recently issued on “Severe Vomiting During Pregnancy,” holds that there is always a cause for the severe vomiting, which must be found and corrected when it will cease. He gives as the most important causes displacement of the gravid uterus, thickening or induration of the cervix, endometritis, adhesions from old inflammatory action, etc. I grant all this, and yet in themselves they may be such important factors that before they could be removed death would ensue. There are cases in which no cause save the presence of the foetus in utero can be found, as the following will illustrate.

Was called March 20, last year, to see Mrs. H., in consultation with Dr. Archer, of North Baltimore. She is a multigravida, and during her last pregnancy had suffered greatly from obstinate vomiting, which was finally arrested with ingluvin. She was now in the sixth or seventh week of her third pregnancy, and had been confined to her bed for two weeks, vomiting incessantly. Practically the whole list of remedies in such cases had been tried. As ingluvin had relieved her during her last pregnancy, and had not been used this time, it was concluded to give it a second trial, but it proved worthless. Oxalate of cerium alone and combined with ingluvin was given, but to no purpose; in brief, the entire gamut of therapeutic remedies, singly and combined, were used with negative results. Anything taken into the stomach, whether liquid or solid, was immediately ejected. Even when nothing was swallowed there was constant retching. An examination per vaginam was made, but nothing was found that could in any way aggravate the trouble. The uterus was freely movable, and was in normal position. The os uteri, as suggested by Dubois, was dilated, and a pledget of cotton soaked in glycerine was crowded well up against the cervix with the hope of lifting the uterus higher up in the pelvis, but this was of no avail. Applications of nitrate of silver and cocaine were made to the cervix, and the only effects noted were almost entire suppression of urine, and the most intense strangury produced by the latter; two symptoms I have never seen mentioned as following the application of this drug. In the meantime no food was taken into the stomach, but was injected into the

¹ Read before the Ohio State Medical Society at Sandusky, June 17-19, 1891.

rectum as extolled so highly by Dr. Campbell. Cracked ice was used to allay thirst. Injections into the rectum of bromide of potassium, as suggested by Dr. Bussey, of Washington City, was used with the same unfortunate results. Nothing gave any relief, except hypodermic injections of morphine and atropine, and as soon as the effects of this would pass away in the least degree, retching would commence. Cocaine was given internally, but to no avail. Two weeks were thus consumed in a fruitless endeavor to relieve this woman of her suffering. She had now been confined to her bed four weeks, retching and vomiting incessantly. She was greatly emaciated; the eyes sunken; features haggard; the pulse weak and rapid, usually one hundred and twenty per minute, and the abdominal muscles markedly tender. She was now so much reduced that it was feared any untoward symptoms following an abortion would prove fatal, but to my mind it offered the only hope of relief. After consultation, and the facts stated to husband and wife, it was decided to relieve the uterus of its contents, which I proceeded to do in the following way: The vagina was well washed out with warm carbolized water, and a uterine sound, previously made aseptic by carboic acid and alcohol, was gently inserted into the uterus, where it was allowed to remain for an hour; four hours subsequently it was again introduced where it was allowed to remain for the same length of time. This was at six o'clock in the evening; at two o'clock in the morning I had the extreme satisfaction of knowing that the contents of the *cavum uteri* had passed away. The woman did not vomit again. She was given half a glass of hot milk, and immediately fell asleep and slept until morning, when she was given some beef tea. Her recovery was uninterrupted.

I have thus at some length given the means adopted for relief in this obstinate case, to illustrate the fact that cases do occur in which no cause for the vomiting can be found, save pregnancy alone, and that absolutely nothing will end the sufferings of the unfortunate victim save the induction of abortion. Prof. Hirst, of Philadelphia, whom we all admire so much, advocates a plan of procedure where this is to be done that I regard very highly, and that I should follow again. After fixing the cervix with a double tenaculum he dilates the canal with graduated bougies until it attains approximately the diameter of one's thumb. Iodoform gauze is now packed into the cavity and a pledget of antiseptic cotton is placed into the vagina, these are allowed to remain until such time as uterine contraction demands their removal. Dr. Hirst recently reported to the Philadelphia Obstetrical Society four cases of hyperemesis gravidarum, in all of which, except one, it was necessary to induce abortion. The first one of the series it had been done in a former pregnancy, the second one died three days after the operation from inanition, the remainder recovered. In each of them rectal alimentation had been used, and medicine given canonically. In all of these cases the strength of the patient was much reduced and the pulse was weak and rapid.

Abortion for the relief of obstinate vomiting in pregnancy was first done by Simmond, in the year 1813. In 1852 it formed the subject of a very animated discussion in the French Academy of Medicine, but as might have been expected such a diversity of opinion was expressed that no definite ideas could be formulated. It is not at all surprising then, than when the great leaders of medical thought hold so radically antagonistic views, the rank and file of the

profession have so long hesitated in doing or recommending the operation. Indeed, there are those yet who believe that such an operation is never justifiable. They have faith to believe that in some unknown and mysterious way, nature or providence will interfere, the vomiting cease, and the life prospective saved. I am one of those who are unwilling to trust to either nature or providence what is clearly my duty to perform in the premises, lest they be in other business and my patient suffer. Cazeaux says, that under no circumstances ought such an operation to be done for the relief of vomiting. I am informed that Martin, of Berlin, holds the same views. Fortunately for suffering womanhood this idea is passing away, slowly though it may be.

Lusk, in speaking of the subject, says, "if the rectal method of nutrition fails to relieve the patient, the induction of abortion or premature labor should be resorted to before the stage of extreme inanition is reached." Muller says, "the induction of abortion is justifiable in all cases in which the continuance of the uncontrollable vomiting unmistakably threatens the maternal life." Parvin, "the true radical treatment of uncontrollable vomiting in pregnancy is emptying the uterus." Hirst holds the same views.

There are those who will object to this procedure because some die after the operation. Granted, but why? I am satisfied that in our anxiety to save a life that has only a problematical existence we jeopardize that of one which has an actual existence by waiting too long; in this, I think, we are culpable. Fleischler, in reporting five cases of pernicious vomiting, three of which perished, gives it as his belief, that the uterus was emptied too late. Hirst says, in his opinion, if interference had come early enough the patients would not succumb.

Another objection that is sometimes urged is, that it has a very deleterious effect on the woman's subsequent health. I do not regard this position as at all tenable. I think if we reflect on the number of women who have had one or more miscarriages, we will find that quite as many are invalids who have never miscarried as those who have. The radical optimist will argue that we have no right to perform an operation which has for its primal object the destruction of foetal life, even though the ultimate object be to save one of vastly more importance. With such a belief I can hold no fellowship. If the mother dies the child will die also, and thus we have lost by neglect two lives, where if the foetus is sacrificed the one of greatest consequence to family and community is saved. I am aware that this *might* be abused, and yet I am slow to believe that a conscientious physician, after consultation and deliberation with a fellow practitioner would deliberately perform an act for which his own conscience—to say nothing of the laws of God and man—would condemn him.

Is there any symptom that will serve as a guide to indicate when the life of the woman is in danger? After a somewhat careful study of all of the cases at my command, there is one that seems to be constant, and that is a weak, rapid pulse. Fleischler refers to it in the cases reported by him, and says he regards this "as the most important indication of danger." Prof. Hirst also speaks of the rapid, irregular pulse; it was present in the case referred to in this paper. If further observation shall confirm this it will prove of great practical importance.

From the foregoing I deduce the following propositions:

1. There are no medicines on which we can rely for the relief of hyperemesis gravidarum.

2. The injection of food into the rectum will not give relief.
3. The induction of abortion for the relief of incoercible vomiting is a legitimate operation, and should be done before the state of exhaustion sets in.
4. A weak, rapid pulse is an indication of danger.
5. It should never be done without consultation.
6. It should be done with antiseptic precautions.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

SCIATICA requires decided treatment at first. This is true of neuralgias in general. Phosphorus best fulfils this indication, and may be given with the following:

Phosphorus.....	gr. $\frac{1}{60}$.
Strychnine	gr. $\frac{1}{60}$.
Quinine	gr. ij.
Belladonna ext.....	gr. $\frac{1}{4}$.
Arsenious acid.....	gr. $\frac{1}{20}$.

At the end of five days stop the phosphorus, and continue the rest with the addition of Vallet's mass, gr. iij. If there is then no ill effect, it may be continued for several weeks.—*Waugh*.

FOR GONORRHOEA.

R.—Salol	3j.
Alum	3ss.
Oleores. cubebæ	3j.
Copaibæ	3j.
Pepsinæ sacch.	3ss.
Ol. gaultheriæ	gtt. x.

M. Ft. caps. No. xx.

Sig. Two every three hours.

There is no case recorded where the use of salol has been followed by gonorrhœal rheumatism. Where the patient is very nervous, the above prescription may have combined with each dose about gr. $\frac{1}{10}$ of morphine, or it may be given independently.

The skin may be profoundly disturbed by the use of copaiba, giving the odor of the medicine, which may also cause itching. When you find the medicine having such effect, remove it from the system by mild diuretics. To relieve the itching, use warm baths with bicarbonate of sodium in solution.

—*McConnell*.

Dr. McConnell gives the following injections for gonorrhœa, after the acute stage as subsided:

R.—Acid. tannic.....	gr. xv-xx.
Liq. plumbi subacet.....	3j.
Ext. opii aq.....	gr. xxx.
Aquæ.	3vj.
R.—Zinci sulph.....	gr. xvj.
Aquæ dest.....	3viij.

This becomes sulphocarbolate of zinc by adding carbolic acid, gr. x.

R.—Zinci acet.,	
Plumbi acet.,	
Cupri sulph.....	āā gr. x.
Morphinæ acet.....	gr. vj.
Aquæ dest.....	3viij.
R.—Hydrastis (Lloyd's).....	3ij.
Zinci sulph.....	gr. xv-xx.
Aquæ dest.....	3vj.

If on using an injection, the bladder is irritable or the testicle begins to swell, it is well to discontinue the use of the injection.—*McConnell*.

When catarrh follows jaundice, without having preceded it, the catarrh is probably due to a lack of bile. When it precedes, the jaundice is probably due to catarrh; that is, to an extension of the catarrh.

—*Anders*

Treatment of simple jaundice—is of catarrh. Take away starchy, saccharine foods, from the fact that these rapidly undergo decomposition where there is a catarrhal condition. Give milk with animal broths to start with, until the character of the stools has been changed. Next to diet, attend to digestion and bowels. To assist digestion, use peptonized milk; regulate bowels by minute doses of calomel. Do not give active cholagogues before there is some evidence that the bile is being discharged from the liver. Phosphate of sodium has one of the best effects on the catarrhal state of the mucous membrane of the stomach, bowels and bile ducts, and will often open the duct when nothing else will; 3ss dose every three hours in half teacupful of warm water. When the bile begins to flow, a drastic cholagogue may be given. This is best done by compound jalap powder. Nitromuriatic acid should be given, well diluted, on an empty stomach; gtt. x one hour before each meal.

—*Anders*.

In catarrh of the pharynx, for its local astringent action:

R.—Potassii chlorat. pulv.....	3j.
Acid. hydrochlorici.....	3iss.
Misce et adde,	
Tr. ferri chlorid.....	3ij.
Aquæ	ad 3iv.

M.—Sig. 3ss. to 3i. p. r. n.

This prescription, given in doses two or three hours apart, gives relief in catarrh, and is also good in diphtheria.—*Waugh*.

HEART TONIC.

R.—Tr. strophanthi.....	gtt. ij.
Tr. physostigmatis	gtt. iv.
Tr. ignatiæ.....	gtt. iv.
Tr. hydrastis.....	gtt. xx.
Acid. arseniosi.....	gr. $\frac{1}{10}$.
Ext. cascariæ sagradæ fl....	q. s. ad 3j.

—*Waugh*.

For threatened nasal catarrh, wash out the nose with warm water and salt, and drop into the nose a teaspoonful of warm liquid cosmoline; also, give a laxative to deplete the system.—*Waugh*.

OINTMENT FOR PSORIASIS.

R.—Chrysarobin.....	gr. xxx.
Benzoinated lard	3j.

External treatment alone is not of much account for psoriasis, as it returns, unless there is internal treatment as well. Internally, give iodide of potassium.—*Shoemaker*.

The following are also recommended in the treatment of psoriasis by Prof. Shoemaker:

R.—Sublimed sulphur	gr. x.
Bitartrate of potassium.....	gr. ij.

In either powder or capsule, three times daily.

Or,

Hydrargyri chloridi cor.....	gr. ij.
Tr. gentianæ comp.....	3v.

Teaspoonful three times daily, increased to two teaspoonfuls three times daily.

For painful urination, complicating gonorrhœa, Dr. McConnell gives:

R.—Kali bicarb. 3ij.
 Kali bromidi. 3iv.
 Syr. ferri bromidi. 3ss.
 Syr. aurantii cort. 3ss.
 Aquæ q. s. ad 3iij.
 M.—Sig. Teaspoonful, three times a day, in water.

Or,

R.—Liq. potassæ. 3ss.
 Tr. hyoscyami. 3iiss.
 Syr. zingiberi. 3iiss.
 Aquæ cinnamoni. q. s. ad 3vi.
 M.—Sig. Teaspoonful three times a day.

An aneurism in the ascending arch of the aorta may occur simultaneously with valvular trouble of the heart. On the other hand, the aneurism may so separate the semilunar valves as to cause aortic regurgitation. Where it does not show on the chest, such cases have been pronounced simple aortic regurgitation. There is no distinguishing point in cases of this kind.

Again, in cases of chronic endarteritis or aortitis, when there is really no aneurism, we may have all the symptoms of an aneurism that does not show on the surface, so that in certain conditions, especially where the aneurism appears in the valves, it is hard to diagnose.—*Anders.*

A peculiarity of neuralgia is that a gentle touch or pressure causes pain, whereas firm pressure causes no pain.—*Waugh.*

Catarrhal stomatitis generally occurs in strumous children, or in those who have been neglected. The treatment is cleanliness and regulation of diet. It generally occurs at dentition. The following wash is good for this disease:

R.—Sodii bicarb.,
 Sodii borat. āā 3j.
 Creasoti gr. ij.
 Glycerini,
 Aquæ menth. pip āā 3j.
 M.—Sig. Mouth wash.

—*Hollopeter.*

PLACEBOES.—Take a ride with me out into the country, if you please, out among those fellows who are shouting for the free coinage of silver, who want mortgages taxed, and interest reduced to 6 per cent., or better yet to borrow money of the government at 3 per cent.

The first one of these old fellows we will call upon for the purpose of injecting morphine under his skin for chronic rheumatism; we find a potato in one pocket and a horse chestnut in the other. That large iron ring on his forefinger has the magical power of slowly drawing the rheumatism out of him, and once a day he scrapes it off the ring with his jack-knife. We also find an electric belt around his body and electric pads in his shoes. He has just fourteen different kinds of liniments, and has tried at least a hundred popular placebos, for every family in the country has its list of placebos. This man told me once in confidence that he thought he had devils in his body; he said he could feel them creeping about. And then I thought, this fellow is about as far ahead of an ancient Egyptian as Bob Ingersoll is ahead of Moses.

Then again we find that many of these people only have faith in very strong medicines, strong in more sense than one, strong odor for instance. A fellow came to me once with a head that in some respects resembled the head light of a steam engine; the ex-

tensor muscles of a neighbor's arm had been the first cause, while another kind neighbor had prescribed a fresh cow-manure poultice, which completed the likeness.

An infusion of the dung of sheep under the name of "Nanny berry tea" is a very popular medicine to bring the rash of measles out. It is said to cure when all other remedies fail.

—Conley, *N. W. Lancet.*

ACETANILIDE IN BRONCHITIS.—Hitherto catarrhal bronchitis has been regarded as a disease of the bronchial mucous membrane, produced in the majority of cases by a chilling of the general surface of the body and quite independent of any specific infection. It will be my endeavor in the following remarks to prove that bronchitis is the direct outcome of infection by a specific organism. My attention was first drawn to the existence of the organism, which observation has led me to believe to be the actual cause of bronchitis, during the examination of sputum for the bacillus tuberculosis. Many cases of catarrhal bronchitis were sent to me to examine in view of the possibility of the bacillus tuberculosis being present in them. In a very short time the constant presence of a bacillus of regular form and characteristic appearance was evidenced to me. Having assured myself of the presence of the organism in every case of bronchitis which had hitherto come under my notice, my next endeavor was to isolate the organism by the gelatine plate cultivation process. In this I succeeded without difficulty. Next, a series of subcultures was made, with constant testing as to the purity of the subculture by further plate cultivation.

One decigramme of each of the following substances was added to a tube of nutrient agar-agar, and also a tube of nutrient gelatine. The tubes were then inoculated from a subculture of the organism; other tubes were inoculated as control experiments, with the results tabulated below:

Iodoform	Free growth in	7 days.
Carbolic acid ($\frac{1}{4}$ per cent.)..	"	7 "
" (1 ")..	"	10 "
" (2 ")..	"	28 "
" (10 ")..	"	50 "
Menthol	"	3 "
Thymol	No growth.	
Boric acid	Slight growth after 10 days.	
Aniline chloride	Free growth in 4 days.	
Acetanilide	No growth after 40 days.	
Untreated tube	Free growth in 24 hours.	
Liq. hydrargyri perchloridi..	No growth after 60 days.	

It was thus found that a free growth of the organism took place upon the tubes of nutrient material, to which iodoform, carbolic acid, menthol, and aniline chloride had been added in considerable quantity. But tubes to which acetanilide and liquor hydrargyri perchloridi had been added gave no growth even when kept for a long period. Of these agents capable of checking the growth, acetanilide alone was available for internal administration, and this agent appears to possess antiseptic powers equal almost to those of perchloride of mercury, while being perfectly innocuous, odorless, and tasteless. Further, when administered as an internal remedy it appears to possess the power of cutting short acute catarrhal bronchitis in a striking and rapid manner, twenty-five consecutive cases being treated with the remedy with unvarying successful result in arresting the disease within a few hours. Doses of some magnitude must be given, such as 5 grains, at alternate hours.

—Grün, *The Lancet.*

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BLOOD-SERUM AND BACILLI.

IN *The Sei-i-kwai Medical Journal*, Professor Ogata, of the Imperial University, of Japan, details some experiments made by himself, concerning the influence exerted by animal blood upon foreign organisms. Not without some difficulty the worthy Professor's English has been deciphered, and the following is a condensation of his report:

He claims to have separated, from the blood and serum of dogs and chickens, a peculiar substance, whose chemical composition is not known.

1. To obtain this substance, Ogata took 10 c. c. serum and globulin of dog's blood, passed through it carbonic acid, and dissolved in 2 c. c. distilled water, rendered slightly alkaline by carbonate of soda. Two drops of this fluid were injected into two mice, at the same time inoculated with anthrax. A third mouse was inoculated with anthrax, for comparison. All died in two days; no difference having been manifested in the symptoms.

2. Ten cubic centimeters of dog-serum were put in the funnel, with two drops of soda solution, and ten c. c. ether, and agitated well. The fluid separated into two layers: the ethereal was removed and evaporated in the air; the residue was dissolved in $\frac{1}{2}$ c. c. distilled water, and filtered. One mouse was inoculated with two drops of this filtrate; another with the same quantity of serum from the lower layer, and both with the anthrax bacillus. The first mouse died in two days with the usual symptoms; the second remained healthy.

3. Twenty-five c. c. serum was added to 200 c. c. absolute alcohol and left for twenty four hours. Of the upper transparent, alcoholic layer, one or two c. c. was put in a test tube and ether added. A white precipitate was let fall. This was placed in 200 c. c. ether and allowed to stand twelve hours; filtered, dried and pulverized. To this was added ten c. c. luke-warm water, and after standing five minutes, it was filtered. Two mice were inoculated with the filtrate, and with anthrax, but both died at the same

time as the control animal. But, no anthrax bacilli could be found in the blood or in the internal organs of these two mice, though innumerable bacilli were found in the control mouse. The cause of death was not anthrax.

4. To the remaining filtrate was added 200 c. c. of mixed alcohol and ether. A large, cloudy precipitate fell. This was filtered, but the quantity was so small that it could not be scraped off the paper; so that 6 c. c. glycerine and water were added; and from this about 4 c. c. colorless filtrate obtained. With this various experiments were made on animals inoculated with anthrax, from mice dying of it. Out of six mice, four remained alive and well. The two that died contained but few bacilli, smaller than those found in the controls; all of which died, with enormous numbers of bacilli in the blood and organs. Two guinea pigs were similarly treated; one became weak, but gradually recovered; the control died in two days. These experiments showed that the protective principle existed in the glycerine extract; one-half drop being effective in mice and two and one-half drops in guinea-pigs.

By the same method a glycerine extract was obtained from chicken's blood. One drop proved protective to mice, inoculated with septicemia bacilli; and two drops protected pigeons. This showed the chicken's blood to be protective against the septicemia of mice.

The glycerine extract of dog's blood exerted no peptonizing action on fibrin.

Warming to 45° for an hour deprived the extract of its prophylactic power.

The addition of 5 per cent. carbolic acid to dog-serum deprived it of its power; acidulation with muriatic acid had the same effect.

The glycerine extract was diluted with distilled water, 1 to 4, inoculated with cholera bacilli in gelatine, by platinum needle, and a drop added to gelatine, making an Esmarch plate-cultivation. Some hours later, another plate-cultivation was made for comparison. Three days later, the cultivation made first with the mixture produced innumerable colonies; while in that made with the culture that had been mixed with the glycerine extract for some hours, but one colony of cholera bacilli was found. The same result was obtained from similar experiments with typhus bacilli.

These experiments lead the author to the following conclusions:

1. The anti-bacillic agent in dog's blood is soluble in water and in glycerine, insoluble in ether and in alcohol; but is not rendered powerless by the latter reagents.

2. It does not lose its power when mixed with weak alkali; but loses when mixed with carbolic or muriatic acid.

3. One hour's exposure to the temperature of 45° (C?) destroys its power.

4. The substance has not only the power of conferring immunity upon animals, but has also anti-septic powers; the glycerine extract retaining its virtues indefinitely.

5. The substance in question has no power to change fibrin into peptone, or starch into sugar.

In preparing the ferment, Ogata adds ten or fifteen parts of alcohol and ether (p. a.) to one part of blood or serum, lets it stand quietly one or two days, filters, and dries in the air. The dry precipitate is powdered in a mortar; lukewarm glycerine and water added, and, after three or four minutes, it is pressed with a piece of linen or muslin, and filtered. To the filtrate is added again a mixture of alcohol and ether, and, after standing for one day, it is again filtered, and the precipitate dried. This is dissolved in distilled water, one-fourth the volume, filtered, and, finally, glycerine and water added, one-fourth its volume.

These interesting experiments may be read in connection with Prof. Semmola's paper, published in our last number. They seem to indicate that there is some singular power residing in the blood of certain animals that renders them immune against certain morbid bacteria; and that this immunity can be transmitted by inoculation to animals not in themselves proof against the diseases due to the bacteria in question. Few will be found to blame the conservatism shown by Semmola in judging of this matter; but, while not perhaps as brilliant in promise as the tuberculin, the results are sufficient to justify further research. As we have already pointed out, the action of tuberculin is simply an amputation of diseased tissue; and the applicability of such an action to treatment is a matter purely experimental. But in the work of Semmola and Ogata there is a more rational prospect of the development of a useful therapeutic method. It is an effort to utilize the forces employed by nature, for the same purpose that we ourselves have in view; and this is the most rational therapeutic principle that has ever been proposed. It is a long step ahead of the antipathic action based on physiological experiment.

Meanwhile, the whole subject is still but in its initial stage; and every step is to be cleared of possible fallacies. To begin with, the glycerine used in the extracts may not be simply a neutral agent. There is a difference between glycerine introduced into the stomach, to be quickly diluted out of all possibility of activity, and the same body injected beneath the skin.

Letters to the Editor.

DR. WHITNEY'S CASE.

DR. L. W. WHITNEY, of 112 West Madison street, has, within the past few days, been so unmercifully scored by the press I think it only justice to him and the profession that you allow space in your valuable paper for an explanation of the facts in the case.

Instead of his being "a monster in human form," the doctor is a gentleman. Instead of his being "weazen-faced and ungainly," he will compare well with the rest of humanity. Instead of "assaulting a patient with a deadly weapon with intent to do bodily injury," he merely clipped the stitches he had taken in a wound (with a very small pair of scissors), causing no pain—from the patient's own

testimony in court—nor danger to life—as sworn to by medical evidence in the case. And instead of "transgressing the laws of the medical code," he did little deserving even of censure.

The medical profession is greatly imposed upon—especially in certain localities—by a class of people who never attempt to pay their bills. The doctor's time is taken, whether it happens to be in the daytime or at night; his carpets are often soiled; his instruments and basins are soiled, and his person is soiled. He uses expensive material in the dressings and appliances, and in about nine cases out of ten, as is the custom with a certain class of individuals, the patient leaves the office with the consoling remark that "when I draw my money I'll pay you." But they seldom "draw their money"—for the doctor.

Time and again we are called up from a sound sleep to cleanse and plaster and stitch just such cases as this one in question, and in many instances never get even *thanks* for our pains.

This man went to Dr. Whitney's office with a cut about two inches long in the top of his head, which, he told the doctor, he had received accidentally "by the falling of a brick from a building." He told the doctor also that he had the money to pay for having it stitched. He was placed in the operating chair, the doctor washed the blood from his head and face, antisepticated the wound, took four stitches, and applied the proper dressings. Then came the cause for "the doctor's awful deed!" After all this work was done, the patient said he did not have the money to pay for it. He had wilfully falsified to the doctor in order to get the wound dressed. Dr. Whitney then removed the dressings and the stitches, and told him he could go. In removing the stitches the doctor used no violence, and there was no "mutilation of the wound," as has been stated. In court, the evidence of the doctor who subsequently dressed the injury (Dr. Butland) was to the effect that no real harm had been done by the removal of the stitches; and the patient himself admitted that no pain was produced by their removal. He also admitted before the justice that he had no special occupation, that he was known by two or three aliases, and that he had received his injury in "a four-handed, free-for-all fight."

It was some time after he was in Doctor Whitney's office that "he was found in a dazed condition." Where? Carousing in a saloon, "dazed" from the effects of bad whiskey.

Now, these are the facts in a case in which Doctor Whitney has been greatly misrepresented. Public sentiment is against him, because a large proportion of the respectable class of society do not know to what an extent the doctors are imposed upon, and while I will admit that it would not be good policy to make a practice of removing stitches from a wound that has just been dressed, I know that in this particular case the doctor has been so reviled and misunderstood he deserves to be set aright before the public.

In making this statement, I am voicing the sentiments of many physicians with whom I have conversed, and who coincide with me in saying that if the doctors would pursue the plan of the members of the legal profession—a fee in advance—when we have dealings with the unsavory class of patients; or, at least, be more exacting than many of us are, we would get far more rest and sleep, and would be troubled less by a lying, drinking, pugnacious and non-paying element of humanity.

SIREMBA SHAW, M. D.

CHICAGO, ILL.

Book Notices.

THE PHARMACOLOGY OF THE NEWER MATERIA MEDICA.

Embracing the Botany, Chemistry, Pharmacy, and Therapeutics of New Remedies. Being the results of the collective investigation of new remedies, under the "Working Bulletin" System, properly arranged, classified, indexed, and placed at the disposal of the medical profession. Contents of this part: Lippia Mexicana; Liquid Ergot, Normal; Manaca; Mangosteen; Manzanita; Menthol; Mercury Weed; Mistletoe. Issued in bi-monthly parts. Subscription price, \$2.00 in advance; single copies, 25 cents each. Detroit, Mich.: Geo. S. Davis.

LECTURES ON TUMORS, FROM A CLINICAL STANDPOINT.

By JOHN B. HAMILTON, M.D. For the use of students. 1891. Detroit: Geo. S. Davis. Pp. 138. Cloth, 50 cents; paper, 25 cents.

The lectures are based on stenographic notes, and preserve the colloquial form to some degree. The author promises to supplement this little volume with another on "Tumors of the Regions."

The Medical Digest.

PERNICIOUS ANEMIA.—Handford reports a case (*Brit. Med. Jour.*) that recovered, under the use of arsenic, pushed until well-marked pigmentation ensued.

BENZOLE FOR TRICHINOSIS.—Puetter was called to treat twenty-seven persons who had eaten trichina-tous pork. He gave to each, benzole, in doses of 100 minims, in capsules, followed by laxatives. The benzole was well borne, and all the patients were still in good health after eight months.

PYOKTANIN IN CANCER AND TUBERCULOSIS.—M. Quenu has tried subcutaneous injections of methyl-violet in two cases of malignant disease and in two of tuberculosis. In each of the former cases (epithelioma of the base of the tongue extending to the jaw, and recurrent lympho sarcoma) ten injections (1 in 500) were given without any good result. The injections caused central foci of softening, but the superficial part of the tumor was not affected, and there was no trace of staining in the glands. M. Quenu concludes that the methyl colors are not diffusible; this, according to him, forms an additional argument against the method.

THE RELATION OF MEASLES TO PUERPERAL FEVER has been rarely noted. Many puerperal women have been known to contract measles and develop only the characteristic phenomena of measles. Many authorities embrace measles in the list of zymotic diseases which may produce puerperal fever, but I am unable to find one who reports a well marked case. In view of the fact of the prevalence of measles one would expect to hear of many cases of puerperal fever caused by it, if in reality there is any such relation.

There was only one death in the maternity for two years; the 165th case. The labor was normal, and no source of contagion could be traced; strict antiseptics having been observed. In the orphan asylum connected with the maternity, an epidemic of measles had occurred. The woman had assisted in caring for the sick children up to the day of her confinement. She exhibited no symptoms of measles; but it is believed that scarlatina induces puerperal fever, without producing scarlatinal symptoms.

—Powell, *Cleveland Med. Gazette.*

IRRITABLE HEART.—The treatment for muscular feebleness, must include a liberal allowance of rest, alternated with regular, not severe, exercise. We would be afraid of Oertel's method of mountain climbing, which he so strongly advises, for weak hearts; preferring, on the contrary, more moderate exercise. As therapeutic agents for this condition, iron, nux vomica, ergotine, and the chloride of barium in pill form, have given us the most satisfactory results. A very good formula for the above is the following:

R.—Ferri sulph. exsic..... ʒijss.
Ext. nucis vomicae gr. xij.
Ergotinæ ʒijss.
Barii chloridi..... gr. x. to xxx.
M.—Fiat pil. No. 50. Dose, one after each meal.

—Martin, *Kas. Med. Jour.*

NIGHT SWEATS.—Not by any means the least significant and trying symptoms of advanced phthisis are the well-known night-sweats, and hence all the kingdoms of nature have been ransacked to find a remedy really effective in combatting them. The drugs which have hitherto played the chief rôle in this department are camphoric acid and agaricin. According to later investigation, however, these remedies are surpassed by *tellurate of sodium*. Salts of telluric acid are known to possess a very repulsive garlic-like odor, which will probably stand somewhat in the way of the extended use of the remedy. The dose adopted is eight grains, which is given in the evening. As the compound possesses antiseptic properties it will possibly prove effective in ameliorating the severe pulmonary symptoms of the disease mentioned. It is said to prove equally beneficial in other diseases characterized by abundant excretion of perspiration, such as rheumatism, typhus, nervous exhaustion, etc. —*Prov. Med. Jour.*

OREXIN.—It is, unfortunately, too rarely the case that authors take the trouble, with reference to the earlier literature of the subject on which they write, to do more than superficially refer to it, while in the greater number of cases there is merely appended a list of the treatises previously published in medical literature. Drs. Kronfeld and M. Matthes, of the Jena University General Hospital, have gone further than this in two recent communications on the use of *Orexin hydrochloride* as a stomachic. The former sums up all the cases which have been described, and compared them in tabular form with his own cases, reaching in this way the conclusion that out of some 250 cases, successful results have been attained in about 160. Dr Matthes adds to these numbers twenty seven cases of anorexia from various causes, out of which sixteen yielded satisfactorily to treatment with orexin hydrochloride. He believes that the effect of the remedy consists principally in stimulation of the secretion of the hydrochloric acid, so that its failure in atrophic diseases of the gastric mucous membrane is readily understood. It is also clear that orexin is not indicated in the cases of persons of cachectic habit, or who have a predisposition to amyloid degeneration. On the other hand, these observers agree, and herein they are in accord with Penzoldt Reichmann and others, that orexin is indicated in cases of loss of appetite not associated with any important degree of anatomical alteration, where there is no advanced pernicious generalized disease, or where hyperacidity with excess of hydrochloric acid is not present. —*Prov. Med. Jour.*

ARISTOL IN CHRONIC DYSENTERY.—Dr. B. M. Randall, of Graceville, Minnesota, writes as follows to the *Medical Age* of June 25. "My experience with aristol, in chronic dysentery, is confined to three cases, but the evidence of its virtues is sufficiently marked to excuse bringing it to the attention of those who are having difficulty with this intractable disease. I will briefly submit notes of my worst case: P. B., aged sixty years, confined to bed for six weeks, and getting worse. Operations averaged one hourly; great pain, tenesmus and large quantity of blood; emaciation extreme; location of pain would indicate involvement of lower half of transverse colon in the ulcerative process. A twenty-grain suppository, containing three grains of aristol and one-third grain of morphine was directed three times a day. Within one week, pain gone, blood had slightly reappeared but once; operations six to eight *per diem*, soft, but not fluid, and almost free from epithelium. In ten days evidence of ulceration had about vanished, and the aristol was reduced to one grain three times daily. Where an extensive portion of the colon is involved, a suspension of the powder in fluid might be suggested."

PHENACETIN IN INFLUENZA.—I am enabled to give the fullest corroboration to the testimony borne by Dr. Henry to the excellent effects of phenacetin in epidemic influenza. During the present epidemic I have used it in the early stages of the illness almost to the entire exclusion of other drugs. I usually prescribe it in doses of from 5 to 10 grains, given either in cachets or suspended in milk, with directions that it is to be repeated in an hour if the pains are not fully relieved, and then every four hours till the patient is seen again. As a result it has been my experience that the headache and pain in the eyeballs, back, and limbs have been relieved certainly after the second dose; a satisfactory condition of diaphoresis has been induced; and on my visit the next day the temperature is almost invariably normal, or thereabouts. I should also add that, as a rule, I give at the same time a dose of calomel, followed by a seidlitz powder three hours later. Comparing the results of treatment in the cases in which I have used phenacetin with those of the previous epidemic, in which I relied on antipyrine and salicine, I am fully convinced of the superiority of the former method. The greater rapidity with which the pains are relieved is very striking. I have seen no bad symptoms whatever as the result of the use of the drug, though I always exercise particular caution with regard to the dose in the case of elderly or debilitated patients. In my opinion, both for cases of influenza and as an analgesic in neuralgia and migraine, phenacetin should rank as one of the most valuable of our more recently acquired pharmaceutical preparations.

—Clemow, *Brit. Med. Jour.*

ERGOTIN.—The subcutaneous application of *Ergotin* has been abandoned by many authors, owing chiefly to the painfulness of the injections. Dr. Aufrecht (*Therap. Monatsh.*), on the other hand, takes an opposite view in the conviction that the action of the remedy is far more reliable when it is injected into the sub-dermal connective tissue than when it is given *per os*, while further, in his hands the application was mostly free from pain, and only rarely in very sensitive patients did any unpleasant sensations follow. He points out that neither dilute alcohol nor dilute glycerine should be used as diluents for the remedy, as these liquids themselves cause

severe pain; only distilled water should be applied. He uses a preparation described as ergotinum dialysatum, of which one part is mixed with nine parts of distilled water, and a few drops of carbolic acid added. The mixture is perfectly clear, and in thin layers transparent. The solution should not be kept more than about five days, or some mould will form, yet even old preparations have been used without any untoward symptoms appearing. Although the author has made thousands of injections he never saw any abscess. As a matter of course the syringe is very carefully cleaned with 5 per cent. carbolic acid before and after each injection. The most suitable places of application are the abdomen and sides of the thorax. The adult dose of ergotin used against hæmoptysis was 3 grs., and when the desired effect was obtained 1½ grs. were given morning and evening for three days. The remedy is employed analogously in the hemorrhage of abdominal typhus, of the bladder, or uterus, unless local treatment is specially indicated.—*Prov. Med. Jour.*

MILK AND DIPHTHERIA.—Klein inoculated two milch cows (both of which had calved three or four weeks, and then had been kept under observation for a week or ten days) with a broth culture of the bacillus diphtheriæ derived directly from human diphtheria membrane, which had been incubated for three days at 37° C. On the third day he found at the seat of inoculation (under the skin of the left shoulder) a swelling containing clear sanguineous serum; this was preceded by a temporary rise of temperature. On the fourth day a small group of vesicles occurred on one teat, and on the udder near to it. On the succeeding days these vesicles lost the clear vesicular appearance, became purulent, and the center became dark, whilst at other stages they were covered with brown crusts. Around each was distinct nodular induration of the skin, and each was placed on a raised injected corium. On removal of the crusts an ulcer covered with a purulent film was left. The pustules and ulcers varied in size from one-eighth inch to one-half inch or more in diameter; most of them were on the udder between the hind teats, but some were on the outer surface of the udder near to the base of the teats; they still continued to appear on the eighth day. The most marked feature about these was that they ran their course in from six to eight days. In the lymph of these vesicles and pustules Klein succeeded in demonstrating the bacillus diphtheria, both under the microscope and in the culture tube. With milk taken from these cows cultures were also obtained, though not in large numbers. If the milk was allowed to stand at a temperature of from 19° to 20° C. the organism was found in enormously increased numbers. One of the cows died on the fifteenth day, the other was killed on the twenty-fourth, when marked post-mortem changes were found; necrosis and œdema at the point of inoculation, enlargement of the lymph glands, pneumonia, enlarged spleen, necrotic patches in the liver, and fatty degenerative changes in the kidney. Organisms were found only at the point of inoculation. Calves inoculated with scrapings of the eruption of the cow developed similar symptoms, but no vesicles were formed. Cats fed on milk from the affected cows died with typical diphtheria, and communicated the disease to other cats placed in the same room, typical diphtheria bacilli being found in the diphtheritic membranes of these animals. The last experiment was not specially arranged, and thus loses and gains in value as it is considered from different points.—*Brit. Med. Jour.*

RESULTS OF THE USE OF TUBERCULIN IN PHTHISIS.

—And now it will be seen that the evidence of the cases narrated does not confirm Prof. Koch's conclusions, but, like those of Prof. Virchow, Ewald, and Dr. C. J. Nixon, they point out some of the difficulties and dangers of the treatment. There is no doubt about the penetrative action of tuberculin, and possibly if something were combined with it this remarkable power of selecting tubercle might be turned to account; as it stands at present in phthisis, its effect is to convert tuberculous masses, which may be perfectly quiescent, into cavities, and the process is by no means always a safe one. As regards the condition of our patients after treatment, all we can say is that they fared worse than the ordinary run of similar consumptives, and, moreover, that several of them improved considerably when transferred from Koch's system to the ordinary treatment of the hospital. There may be, and indeed there are, cases of phthisis in which the promotion of excavation is desirable, and for such the Koch method is indicated; but they are, I take it, exceedingly rare, and for the great mass of consumptive patients it is certainly not indicated. I close this lecture by the following conclusions:

1. Prof. Koch's fluid has a strong affinity for tubercular material, which it appears to penetrate, and to produce inflammatory changes in and around all parts of the body.

2. That the changes in the lung set up seem to be partly necrotic—*i. e.*, destruction of tissue—but partly infective, producing fresh tubercles.

3. That the effect on tubercular consolidations is to cause their softening and excavation, and subsequent removal by expectoration or absorption; that this process of elimination of tubercle by excavation leads to extensive destruction of lung tissue and to the formation of a large number of cavities in lungs formerly the seat of quiescent tubercle, which may give rise to septic infection.

4. That this process is also at times accompanied by fresh tuberculosis in the neighborhood either by infection of fresh tracts through tubercle bacilli passing down the bronchi, or by their penetrating into neighboring aveoli.

5. That, on the other hand, the removal of the tubercular masses by excavation is occasionally followed by fibrotic changes in the lung, which cause contraction of the cavities thus formed, and in this way conduce to arrest of the disease, but that such favorable changes cannot be predicted beforehand.

6. That there is no proof of the possibility of the cure of phthisis by this method within the periods mentioned by Prof. Koch, and that, as at present administered, its results are less favorable than those of the ordinary methods in use.

—Williams, *The Lancet*.

TREATMENT OF TUBERCULAR GLANDS BY INJECTIONS OF IODOFORM DISSOLVED IN ETHER.—

The removal of tubercular glands by operative measures is likely to be superseded by the milder and more efficient treatment of injection of the diseased growth with iodoform dissolved in ether. Dr. Pezzer, who quotes several cases in the *Union Médicale*, asserts that the injection causes very slight pain; that its effect in causing a disappearance of the disease is rapid; and that it has the advantage over excision and scraping that no scar is left. The syringe of Pravaz is used, and should be about half filled with a 5 per cent. solution of iodoform in ether. It is worthy of note that these injections seem to exercise influence

at a distance from, as well as at the site, of their introduction.

TREATMENT OF DIPHTHERIA. — In diphtheria affecting the pharynx and nasal passages the use of peroxide of hydrogen has been found very serviceable by Derlett. Oxygenated water is powerfully antiseptic. The oxygenated water of commerce should be diluted with five or six times its bulk of pure water, and used as a gargle for the throat, and a wash for the nasal passages three times a day. In serious cases the peroxide of hydrogen may be used every hour. The secretions under this treatment coagulate and are absorbed; whilst false membranes are detached. Children bear the treatment well; no accident need be feared. The treatment is useless if the larynx is affected, or if there exists any general infection. Light and heat decompose peroxide of hydrogen, which should be, therefore, kept in colored glass bottles and in a cool place.

SALOL AS A COATING MATERIAL FOR PILLS. — As is well known, salol passes through the stomach in a perfectly unaltered state, undergoing decomposition (into salicylic and carbolic acids) only on coming in contact with the pancreatic juice in the duodenum. Pointing to the fact, Ceppi suggests to the pharmacutists the use of the substance as a coating material for pills containing such medicaments as are destined to act in the intestinal tract (*e. g.*, pancreatine, nitrate of silver, various anthelmintics, etc.). The pharmaceutical *modus faciendi* is thought to be pretty simple and easy, since salol is freely soluble in ether.

REMOVAL OF THE APEX OF THE LUNG FOR TUBERCLE. — In a case of early tubercular disease of the apex of the right lung Tuffier has resorted to operative measures successfully. The means adopted, based upon experiments made upon a dog, consisted in a simple incision through the second intercostal space anteriorly. Afterwards the parietal pleura was divided, which induced a kind of sub-pleural pneumothorax, the apex of the lung became reduced in bulk sufficiently to be easily drawn through the wound, it was then cut away by the ecraseur, and the stump sutured to the intercostal incision, to prevent retraction of the lung. Dr. Tuffier exhibited the patient who had progressed very favorably after the operation.

CHLORIDE OF ETHYL AS A LOCAL ANÆSTHETIC. — In the *Vratch* Lazarevitch says that he tried chloride of ethyl (C_2H_5Cl) as a local anæsthetic in seven cases of minor surgical operations, of which there were unclenations of facial atheromata, two incisions into large and deep abscesses, and two extractions of teeth. The analgesic effects left nothing to be desired, anæsthesia (through freezing of tissues) being complete in half or one minute. In dental cases the substance was applied to the gum (both anteriorly and posteriorly) on cotton-wool globules, covered with a piece of silk tissue, and fixed on a little wooden rod. In the remaining patients the author simply took an ampulla (in which the chloride is sold by the manufacturers, Messrs. Gilliard P. Monnet, and Cartier, of Lyons), broke off the end of its nozzle, and directed the jet towards the area required. The advantages claimed for the anæsthetic are these:

1. It is quite safe.
2. Its application is very simple and easy.
3. No assistance is necessary.
4. It is comparatively cheap (a box with ten ampullæ, containing each ten grammes of the chloride, costs seven francs fifty centimes. One ampulla proves to be sufficient for one or even two cases of minor operations).

CETRARINE is the active principle of Iceland moss, and has been found by Kobert to stimulate the peristaltic movements of the intestines, and to increase the number of red corpuscles and leucocytes, a diminution of which has been caused by exhausting diseases; it also exercises a tonic influence on the nervous system. The use of cetrarine is indicated in chlorosis and anæmia, accompanied by constipation and loss of appetite. The dose is ten centigrammes.—*Prov. Med. Jour.*

H. MERCHE, in *Centralblatt f. kl. Med.*, gives his experience of the use of resorcin during nine years. In diarrhoea of children, accompanied with vomiting, he orders 0.3—0.5 resorcin to 100, teaspoonful to dessertspoonful every two hours. The vomiting ceases in a very short time; the stools rarer and harder. In cholera nostra, one per cent. solution of resorcin stopped the vomiting, and mitigated the course of the disease. The best results were obtained in chronic gastric catarrh. A most valuable property of resorcin is that it can be prescribed either with alkalies or with acids. It is only contra indicated in fresh ulcers ventriculi. He used resorcin with good results in the vomiting of pregnancy, peritonitis and sea-sickness. He lays special stress upon the purity of the preparations, and recommends Merck's resorcinum purum resublimatum albißimum.

At the end of the article some prescriptions are appended, of which I give several:

R.—Solut. resorcin. resublim. Merch .. 0.3—0.5 : 80.0.
Tr. amora..... 1.0.
Syr. simpl. 20.0.
M.—D. vitr. nig.
S. Teaspoonful to dessertspoonful every two hours.

In Cholera Infantum :

R.—Acid. mur. pur.,
Resorcin. resub. Merch.....ãã 2.0.
Syr. cort. aurant..... 20.0.
Aqa. destill..... 178.0.
M.—D. vitr. nig.
Sig. Tablespoonful every two hours.

In Acute Gastritis, Dyspepsia :

R.—Resorcin. resub. Merch..... 0.10—0.15.
Socet. locet..... 0.5.
M.—F. pulv. in chart cerat. No. xxx.
One every two hours.

Sea-sickness :

R.—Resorcin. resubl. Merch 0.50.
D. tal. dos. No. x.
Sig. One at bed-time (as hypnotic).

PROF. WINTERNITZ reports a new method of treatment for gastric troubles. A patient, thirty years of age, hysterical woman, had severe dyspeptic symptoms—vomiting and cardialgia—nothing could stop. Neither hot nor cold applications were of any good. Prof. W. decided to try the combination of hot and cold. The patient was wrapped in a cold and moist, well-wrung sheet; but before putting the dry sheet over the moist, as is usually done, he placed a coil of rubber tubing over the region of the stomach, through which he passed a stream of hot water of 40°. The unpleasant sensation of cold would pass away in a few seconds, and patient would feel a pleasant warmth diffused all over her body. She could then bear such foods which heretofore she could not retain, and she speedily completely recovered.

The professor applied the same method to two other cases, with same successful results.

—*Blätter f. Klin. Hydrotherap.*, May.

DR. SCHWEINBURG insists upon a possibility of more effectually coping with epilepsy by using the bromides in combination with hydro-therapeutic treatment. Dr. S. describes a case of epilepsy, due to injury, in a boy of sixteen years, who was placed on large doses of bromide without any effect. Baths, with frictions, were ordered, and the bromides given in smaller doses. The attacks became less frequent, and the health of patient considerably improved.

—*Blätter f. Klin. Hydrotherap.*, May.

Medical News and Miscellany.

DR. E. L. VANSANT has removed to 1929 Chestnut street, Philadelphia.

DR. S. J. WIMMER has removed to 236 West Forty-second street, New York.

DR. GEORGE BALLANTYNE, formerly of Bellevue Hospital, New York, died suddenly of heart disease, at his residence in Huntingdon, Penna., July 13, aged fifty years.

DR. GUY HINSDALE has resigned as registrar of the Nervous Department, Philadelphia Hospital. Drs. A. A. Eshner, C. W. Burr, and A. J. Smith are applicants for the position.

IN consequence of the prevalence of cholera at Mecca, pilgrims returning from that place have to undergo a quarantine of twenty days at Eltor before proceeding through the Suez canal.

A ST. PAUL physician has vaccinated 200 persons with mucilage. That is a move in the right direction, but we fear it will take more than this to cure the man who dips his pen into his mucilage bottle.

AN electricity crank makes his pen-holders of rolled paper, because, he says, "the action of the steel pen on the paper generates a current that produces 'scriveners' palsy, and paper is a non-conductor."

WORK at the Polyclinic Hospital during June: Cases treated—diseases of children, 99; of skin, 140; of women, 78; of ear, 312; of throat, 287; of chest, 118; of eye, 451; surgical cases, 450; medical cases, 201; deformities, 95; nervous diseases, 137; genito-urinary, 85; massage, 20; in hospital, 39; visited at their homes, 13; total, 2,525.

A CLEVER convalescent in the University Hospital borrowed a United States dispensatory, and wrote a regular prescription for a matutinal cocktail, with the appropriate Latin formula for the ingredients. His ingenuity was rewarded, the prescription was put up and delivered, and the order, with its "fiat caudagalli," now hangs on the druggist's hook.

AN open competitive examination of candidates for junior assistant physician in any of the State hospitals and asylums, will be held at the office of the Civil Service Commission, Albany, New York, Thursday, August 20, 1891, commencing at ten o'clock A. M. A candidate for the position must be a citizen of the State of New York, at least twenty-one years of age, and have had at least one year's experience in a hospital, or three years' experience in the general practice of medicine. For application blank, address the Secretary of the New York Civil Service Commission, Albany, New York.

JOHN B. RILEY, *Chief Examiner.*

THEOLOGICAL PHYSIOLOGY.—If it had pleased God to so order, it would have been quite as easy for an oyster to have swallowed Jonah as for Jonah to have swallowed an oyster.—*Baptist Teacher.*

If it had pleased God to order, it would have been quite as easy to have made an oyster a Sunday-school teacher, and the oyster following its instinct would have shown its wisdom by keeping its mouth shut.—*Congregationalist.*

ELECTROCUTION.—The second execution by electricity under the law of New York took place at Sing Sing on Tuesday, July 7. Four murderers were killed in succession. From the accounts of witnesses present, it appears that in each case death was instantaneous and painless. The voltage was about 1,500, and the current continued for twenty seconds, and a little later repeated. The electrodes were placed upon the forehead and calves of the legs.

THE wine trade is seriously perturbed over the report that a number of speculators in New York have purchased millions of gallons of spoiled wine at a price of about 4 cents per gallon, and are selling it in various large cities for 18 cents per gallon, after mixing with it anilin, salicylic acid and other drugs, and bottling it under counterfeit labels, some foreign and those of well-known California growers.

A FIVE YEARS' MEDICAL COURSE REQUIRED IN CANADA.—The Medical Council of the College of Physicians and Surgeons of Ontario recently passed the following resolution: "On and after July 1, 1892, every student must spend a period of five years in actual professional studies, except as hereinafter provided, and the prescribed period of studies shall include four winter sessions of six months each and one summer session of ten weeks; the fifth year shall be devoted to clinical work, six months of which may be spent with a registered practitioner in Ontario and six months at one or more public hospitals, dispensaries, or laboratories, Canadian, British, or foreign, attended after being registered as a medical student in the register of the College of Physicians and Surgeons of Ontario; but any change in the curriculum of studies fixed by the Council shall not come into effect until one year after such change is made."

—*Med. Record.*

A DIAGNOSIS.—Nature with a lavish hand has endowed the human body with no less than s'teen million of spots to which an ache or pain can be attached. When each one of these spots, both inside and out, is filled with a hard platinum tipped pain; when your head aches so that you are conscious of all the ruffles and scallops on your brain, just as you see them in the pictures in your physiology; when your heart thumps and your stomach wobbles, and you have the feeling that something is wallowing through your inside works; when your sternum feels stove-in and there is an uneasiness under your shoulder blades as though your wings were beginning to sprout; when you are one moment alive to the finger tips with thinking of the things you must get up and do, and the next completely exhausted by even the thought of doing them; when your backbone has the sensation of being twisted by a monkey-wrench; when you are so dizzy that you can't see, and your ears ring, and eyes water, and your nose is in such a state that it is presumption to lay aside your handkerchief for one short minute; when you cough, and sneeze and groan in turn—in fine, when you feel like the very deuce—you can set it down that you have the grip.—*Western Med. Reporter.*

PROGRESS IN OLD LANDS.—In Sweden the medical authorities are heartily in favor of giving ladies a privilege to become apothecaries, have recommended the government to introduce the requisite regulations.

In Norway the women have for the last six years been entitled to study pharmacy, and to manage and own dispensaries, subject to certain conditions.

In Denmark only two women have gone in for pharmacy, and neither of them has passed the final examination.

In Finland there are seven female apothecaries. None of them has passed the final examination, and since 1884 no lady has applied for admission to the profession.

In Russia, ladies have, since the commencement of last year, been entitled to become apothecaries, and nine, having already completed the preparatory studies at Zurich, have availed themselves of the right to pass the Russian examinations. The owners of dispensaries appear, however, to be averse to receiving such ladies as students, and so far none of them have succeeded in gaining admission to any establishment in St. Petersburg.

WEEKLY Report of Interments in Philadelphia, from July 4 to July 11, 1891:

CAUSES OF DEATH.		CAUSES OF DEATH.	
Adults.	Minors.	Adults.	Minors.
Abscess.....	1	Fever, typhoid.....	6
Aneurism of the aorta.....	1	Gaul stone.....	5
Alcoholism.....	2	Gangrene.....	2
Apoplexy.....	16	Hernia.....	1
Anæmia.....	1	Inanition.....	16
Bright's disease.....	7	Inflammation brain.....	2
Burns and scalds.....	1	" bronchi.....	4
Cancer.....	7	" kidneys.....	3
Casualties.....	6	" larynx.....	1
Congestion of the brain.....	1	" lungs.....	8
" lungs.....	1	" heart.....	2
Child birth.....	1	" peritoneum.....	2
Cholera infantum.....	108	" s. & bowels.....	6
Cholera morbus.....	2	" spine.....	1
Cirrhosis of the liver.....	2	Jaundice.....	4
Consumption of the lungs.....	41	Laparotomy.....	1
" bowels.....	1	Marasmus.....	21
Convulsions.....	18	Neuralgia of the heart.....	1
Croup.....	2	Old age.....	12
Cyanosis.....	8	Paralysis.....	7
Debility.....	5	Poisoning.....	1
Diabetes.....	1	Pyæmia.....	1
Diarrhœa.....	1	Shock, surgical.....	1
Diphtheria.....	7	Septicæmia.....	2
Disease of the heart.....	12	Suicide.....	1
" kidneys.....	1	Tabs Mesenterica.....	1
Drowned.....	2	Teething.....	2
Dropsy.....	1	Tetanus.....	1
Dysentery.....	2	Tumor.....	1
Epilepsy.....	1	Ulceration of the bowels.....	1
Erysipelas.....	1	" stomach.....	1
Enlargement of the heart.....	1	Uræmia.....	4
Emphysema.....	1	Whooping cough.....	1
Fatty degeneration of the heart.....	2	Total.....	189
Fever, scarlet.....	3		259

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The Times and Register.

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THE SWILL AND FILTH DISEASES OF SWINE.

By FRANK S. BILLINGS.

Director Patho-Biological Laboratory, State University, Nebraska,

THE GERMAN SCHWEINE SEUCHE, NEITHER A PLAGUE NOR A SINGLE DISEASE, AS SHOWN BY GERMAN INVESTIGATIONS.

PERHAPS no more unfortunate and misleading researches, so far as they have influenced work of a similar kind in this country, have ever been made than those of Prof. Schütz, of Berlin, upon some swine diseases in Germany. The weakness of Schütz's work is its incompleteness, and, in many essential respects, unscientific character. As this work has been the real cause of the assumption of a second swine plague in this country by the government, a totally unwarranted statement, I feel it my duty to place the evidence exactly as it stands, and as plainly and unbiased as I can, before the world. Hence, I will at once begin with the original German evidence, commencing with that of Loeffler, the discoverer of one of the germs in question, and the originator of the name *schweine-seuche*, who says :

"Of especial interest is an observation which I had occasion to make during the course of my investigation of the bacillary-Rothlauf (Rouget) upon a hog which died *presenting the phenomena of that disease.*"

"On October 26, 1882, a swine was sent to me from the swine-market at Rummelsberg, by Kreisthierarzt Eggeling (Professor at the Veterinary School), which he believed to have died from Rothlauf."

"Necroscopical notes: The cutis of the belly, the sexual organs and neck of livid-red color; enormous œdema of the skin of the neck extending between the anterior limbs and along the inferior portion of the abdomen; pharynx reddened and swollen; mucosa

of larynx and trachea of an intensive dark-red color; no mentionable changes in the lungs; in the right lung some parts were dark-red, and contained but little air; nothing especial in heart; clouded swelling in liver and kidneys; mucosa of stomach intensely red, as well as that of the anterior portion of the duodenum; no other changes present in the intestines; mesenterial glands not enlarged; spleen somewhat swollen; dense and dark-blue red in color; the organs were still warm."

Cultures were made from different parts and organs in which there developed, "small ovoid bacteria, reminding one somewhat of the organism of rabbit-septicæmia, especially such as were in the process of fission, but were still to be extinguished from them by their not being half as large."

Inoculations with pure cultures were made upon various animals, one of which only is quoted, because they all give the only striking lesion mentioned in the original hog, and also because Loeffler looks upon it as the pathognomonic lesion.

"Guinea-pigs: *The necroscopical results were identical in all, hemorrhagic-serous infiltration of the subcutaneous tissues of the entire abdomen, extending to the axillary regions anteriorly, and to the inguinal region posteriorly, the muscles being infiltrated by the same reddish œdema.*"

It is unnecessary to transcribe the results of any more of Loeffler's experimental inoculations with pure cultures, as they were all exactly identical, the one striking lesion being this enormous and extensive œdema in all directions from the locus inoculationis, and I will say here, as it will be necessary to repeat quite often, that it is especially desirous that the reader should bear in mind that the one striking lesion observed by Loeffler, both in the original hog and every one of his experimentally inoculated animals, was this "enormous and extensive œdema."

Loeffler, himself, resumes on his results as follows: "From the transcribed observations it is to be seen

that the bacteria found in the fresh organs of a hog, *said to have died from Rothlauf*, differ essentially from the fine bacilli found in the latter disease, both morphologically and in their development in cultures, and also in their pathogenic deportment in the different small experiment animals, as well as in swine. . . . By the predominant interest from a national-economic point of view which these diseases of swine assume, it is very necessary that extensive bacteriological investigations should be made in order to ascertain if the bacteria observed by me in a single case give rise to enzoötics among swine; or, in other words, if we are justified from these results, in considering this etiological moment in differentiating a certain group of diseases from the specific Rothlauf under the name of schweine-seuche, or swine-septicæmia. . . . *The typical hemorrhagic serous infiltration of the subcutaneous tissues and a similar complication of the muscles immediately contiguous is so characteristic for the bacteria discovered by me that the identification of the disease should not be bound with any particular difficulty.*

“THE SCHWEINE-SEUCHE.”

Schütz opens up his remarks upon the disease of swine, to which the name “Schweine-seuche” has been given as follows: “Herr Stabsarzt Loeffler has used the names Rothlauf and Schweine-seuche in the sense that the former name shall be used to distinguish the disease caused by the fine bacilli, and the latter, in which he discovered the other bacteria as ‘Schweine-seuche.’ I shall retain the same differentiation in my own remarks. . . . With regard to the Schweine-seuche we have at present no detailed communications, and I therefore hold it my especial duty to give my attention to this question.”

Although it will burden the reader with a mere repetition of Loeffler’s descriptions, still the questions I shall bring up are of such vast importance in clearing up the unfortunate complications and misunderstandings which have resulted from the German investigations, and in order to show that Schütz should have fully comprehended the meaning of Loeffler’s communication, but neglected to or was incapable of doing so, I will now quote the same words again from Schütz: “Loeffler says, that on October 22d, 1882, he received from Dr. Eggeling a swine, which, according to the latter, had just perished from Rothlauf. The skin of the neck, and between the forelegs, and along the abdomen was livid red in color; *enormous œdema of the skin of the neck extending between the forelegs posteriorly; pharynx red and swollen; lungs little changed, a few dark-red spots in the right lung, which contained but little air.*” It will be remembered that Loeffler suggested that this disease should be termed “schewine-seuche,” or “swine-septicæmia,” and it is necessary to quote a passage from Schütz on this very point.

Schütz says: “I shall consider this conclusion (of Loeffler’s) at the end of my work, but wish now to say, that it gave a false direction to my investigations, and that owing to the exact consideration of *an exceedingly profuse amount of material (!)* I have quite other conclusions as to the seat of the disease.” One of the first things in importance in considering this question before us, is to know whether or not the so-called practical German veterinarians, the men who come in daily contact with animal diseases in the fields and stable had any certain ideas as to different diseases in swine in Germany, and what those ideas were. Among such practical men, the before-mentioned Dr. Eggeling enjoys and deserves a very high reputation, and as he is quoted

upon this subject by Schütz, we cannot do better than to introduce his remarks here: “Eggeling says, that the schweine-seuche is the most frequent and dangerous disease of swine, and has been heretofore classed as identical with Rothlauf. In many districts it occurs nearly every year and causes no inconsiderable losses. It develops very rapidly, the swine appearing to be suddenly taken sick, and in a very few hours look as if stricken down; they lie constantly, and only rise with difficulty and unwillingly, are very weak and display much uncertainty in their movements; the appetite is completely lost, though the sick swine occasionally drink a little; sometimes the animals vomit, and most of them are decidedly constipated. After being ill about twelve hours, a redness of the skin begins to appear in the inferior abdominal regions, especially around the umbilicus and preputium, extending between the hind legs and anteriorly to the neck. *This redness is darker than that accompanying Rothlauf, and gradually extends over the whole body. Swelling of the skin and difficulty of respiration is wanting. The disease terminates in twenty-four to forty-eight hours.*

“Necroscopical examination shows the most pregnant abnormality to be severe inflammation of the stomach, the mucosa of which is of an intensely red color along the greater curvature, much swollen and covered with mucous; the epithelium is wanting in spots; remnants of food are often attached to such places; the inflammation often extends along the duodenum, and occasionally into the large intestine; the mesenteric glands are always swollen, liver often full of blood, or, at other times, dry and friable; spleen sometimes swollen; kidneys full of blood, sometimes inflamed; *lungs, as a rule, healthy; heart clouded, dry, and friable; muscles anæmic.*

“From these phenomena this disease of swine is a blood-poisoning, extending from the digestive apparatus, a septicæmia.”

Schütz does not accept the above to be a correct description of the “schweine-seuche,” but thinks it to be more properly that of Rothlauf, and we can at once notice that the lesion claimed so strongly by Loeffler, “enormous œdema,” is not mentioned by Eggeling at all, but another equally important fact to be noticed, is that the latter says: “*The respiratory organs are, as a rule, healthy.*”

We now come to the results of Schütz’s first series of examinations and experiments, and desire to call the attention of American and other investigators to the insignificant amount of material at Schütz’s command, and also to the absolute absurdity of proclaiming the existence of a “seuche” (pest) upon the examination of a number of hogs, which would scarcely count at all in the study of our American swine-plague. Again, the reader will notice that we have no clinical history whatever as regards this first lot of hogs examined by Schütz, who says:

“In order to close up my experimental investigations of Rothlauf, I had requested quite a number of veterinarians and large agriculturists to send me the organs of swine that died presenting the phenomena of this disease. This request was most cheerfully complied with, and, in a short time, I was provided with a sufficient amount of material to continue my investigations, as well as to study the cause and nature of schweine-seuche.”

“June 15, 1885, there was sent to me *the stomachs, spleens, and livers of three hogs that had supposedly perished from Rothlauf after being ill but a short time. I will not give any description of the abnormal condition of these organs as they were partially foul on arrival.*”

The above is sufficient for our purpose so far as that material goes; it is enough to say that Schütz asserts that he found the same bacillus in small animals inoculated from those organs, and derived pure cultures of the same as that described by Loeffler.

From the organs above mentioned, two mice, one rabbit, one pigeon, and two guinea-pigs were inoculated with small fragments pushed under the skin in pockets made instrumentally. The guinea-pigs and pigeon were not effected. The rabbit alone interests us, and that only as regards "enormous œdema." On the next day after inoculation in the ear that organ was swollen and pendulant, this swelling soon extended along the head and neck; on death the necropsy revealed infiltration of the skin of the inoculated ear, the head and neck *with a clouded fluid. Not an enormous hemorrhagic infiltration which Loeffler claimed to be typical for the disease studied by him!*

With pure culture made from the above animals (that died) there were inoculated two mice, one rabbit, and a pigeon; the latter was not ill, the others died. Of the rabbit it is said "*infiltration of the subcutis of the right ear and right side of the head with a clouded reddish fluid,*" which was not so striking in character as to lead Schütz to look upon it as "enormous œdema." Although he does admit that they died of a septicæmic disease. With pure cultures obtained from these animals in bouillon, *two five months old pigs were inoculated with 2 ccms. each in the inside of the flank of the left hind leg on June 26, at 5 P. M.* On the next day there was a *marked swelling* of the inner surface of both hind legs which was limited to the posterior portion of the abdomen in one hog, while in the other it reached somewhat further forward. (Loeffler also inoculated one pig, which I purposely did not refer to in quoting from him, of which he says "skin of abdomen blue-red color. *Enormous œdema of the skin.*") The skin was of a bluish-red color. The first of Schütz's inoculated pigs died in twenty-four hours post inoculation: "*inner surface of both posterior limbs and the posterior-inferior portion of the abdomen, somewhat swollen; in the middle of the swollen parts was a circumscribed blue red spot, the surrounding tissues being of a diffuse bluish-red color; at these points the subcutis and underlying muscles were infiltrated with a clouded red fluid; the skin tough and thickened.*" . . . The only other lesion interesting us in this examination is that of the lungs "*the inferior portion of the posterior lobe of both lungs being of a bluish-red color and somewhat dense in character; the remaining portions of both lungs of a red rose color.*"

The second pig died on the next day at 5 P. M., *forty-eight hours* after inoculation. "*Posterior limbs swollen considerably which condition extended to the root of the tail, and inferiorly along the abdomen to the second pair of teats; on the swollen parts was to be seen a sharply circumscribed bluish red spot of considerable extent, which was beneath the level of the surrounding tissue; subcutis and muscles of this swollen portion of the body infiltrated by a redish fluid which was decidedly hemorrhagic in character in the blue-red places.*" . . . Lungs in a condition of expiration and but little distended by air. In the posterior portion of both inferior lobes were some small hemorrhagic centers which extended above the cut surface; the tissue otherwise of a diffuse reddish color and œdematous." Another hog was inoculated with 1 ccm. of a bouillon culture on July 14, and died on the night of the 16th, about thirty-six hours; the inferior portion of the abdomen was some-

what densely swollen from the enseniform cartilage to the perineal region, and of an intense bluish-red color, both posterior limbs in the same condition; petechial spots in different parts of the body; a bluish-red infiltration of subcutaneous tissues and muscles of swollen parts; *lungs in a condition of expiration and of a dirty light-red color, cut surface smooth and œdematous.*

So far as Schütz's first series of experiments go this closes the testimony, and it now behooves us to see to what conclusions they led him. He says:

"The previous inoculation experiments in swine show that the bacteria found in the spleen are capable of making swine ill and causing their death. The anatomical picture presented by the inoculated swine demonstrate that the bacteria primarily exert their influence at the locus inoculationis, where they multiply, and are then distributed over the infected organism by means of the blood-vessel and lymphatics. *The inoculated disease deports itself in swine, that is, presents the same phenomena as in rabbits.* If it be remembered that Loeffler discovered an organism in the blood and tissue of a hog which morphologically corresponds with that found by me (Schütz); that this organism (as far as Loeffler's descriptions permit of a conclusion) develops in the same way as that found by me, and that the hog abducted by Loeffler presented almost the same phenomena as those inoculated with my cultures and which perished from the effects thereof; that the Loeffler organism effects mice and rabbits in the same manner, *therefore the conclusion is justified that the disease (in swine) observed by each of us is identical, and caused by the same bacteria.*"

The following points the reader will please bear in mind:

1. While Schütz speaks of a marked œdema, Loeffler always mentions an "*enormous œdema.*"

2. That Schütz asserts that the results of the inoculations in swine with pure cultures were the same as those observed in rabbits and small animals, of which he had said, "*Aus den vorstehenden versuchen ergibt sich, dass mäuse und kaninchen mit kleinen stückchen der schweinmilz geimft wurden, septicæmisch erkrankten und starben,*" *acquired septicæmia and died.*

3. That the course of the disease in the two pigs (five months old) inoculated with 2 ccms. of a pure bouillon culture, under the skin of the inside of the flank, *was twenty-four and forty-eight hours respectively, while the third hog recived but 1 ccm. and died in thirty-six hours.*

4. That while but two pigeons were tested, still that they were not ill at all, even though the virus had such malignity in small animals, as well as hogs, in comparatively small doses.

5. *That no pulmonary lesions other than commonly occur in any case of per-acute septicæmia is noted in either Loeffler's original or inoculated hog, or the three experimentally inoculated hogs of Schütz.*

6. That in neither case have we an iota of clinical history regarding the original hogs from which the primary cultures were obtained.

7th, and most important of all, *that from the location of the Veterinary School and the Laboratory of the Imperial Board of Health, in which Schütz at the time was hülfs arbeiter (assistant-worker), it is self-evident that Schütz must have had, or could have had, access to Loeffler's cultures, and yet either neglected to take advantage of it, or fails to mention the fact, and that under such circumstances he was in duty bound to have made comparative investigations, morphological, cul-*

tural, and inoculative-experimental, in swine; and that, in neglecting to do so, or to mention the fact, his work may be justly said to have been, and is, unscientific, and his conclusions open to the most serious question.

8. Loeffler did not inoculate pigeons, so that Schütz's negative results in two of those birds are absolutely without value in comparing them with Loeffler's in other animals.

9. The evidence given by Schütz is not of that unequivocally positive and conformitory character to warrant the assertion that the hogs studied by him died of the same disease as that studied by Loeffler, no matter if the germs in each case were alike morphologically and in cultures.

SCHÜTZ SECOND SERIES OF EXPERIMENTS.

"August 27, 1885, while Schütz was away on a vacation, there were sent to the Pathological Institute of the Berlin Veterinary School several stomachs and spleens from swine *that were reported to have died from a disease resembling Rothlauf*. The same were examined by Dr. Lüpke, Schütz's assistant and now professor in Stuttgart, and an oval bacterium found therein, of which Schütz says, on his return, "there were in the cultures the same bacteria with which he had previously become acquainted." In this case we fortunately have some history which, as will be shown, is of the utmost etiological importance, though entirely unappreciated and neglected by Schütz, as well as those who have followed in his footsteps in this country.

The forwarder of the specimens was "Herr Kollege Hirschel zu Putlitz," that is, a local veterinary practitioner, who gives the following history both as regards the place where the swine were kept, the feed, and the clinical phenomena noticed in the diseased swine.

The swine were kept at a dairy, and fed upon the refuse of the same, *that is dairy swill*, or, as reported, "the food of the swine consisted only of whey ('Molken') and skim-milk, and was quite acid. The large basin was but seldom emptied, so that old remnants of the food remained there for weeks, as well as in the conducting tubes.

"The first swine put into this place were taken from an older place of the same kind belonging to the same owner, and had been fed with the same kind of food. The owner then bought other hogs, and put them with those first introduced, immediately after which *some showed indications of 'Rothlauf,' and died therefrom*. The pens were then cleaned, disinfected, and whitewashed, notwithstanding which they continued to become ill and died. *Only occasionally were symptoms of Rothlauf apparent*. The clinical phenomena were in general as follows:

"After the newly-purchased animals had been in the pens three or four days, and fed with the above feed from the main reservoir, diarrhoea appeared, the excrement being of a yellowish-green color, and in seldom cases hemorrhagic; at the same time the afflicted hogs appeared stiff in their limbs, with disinclination to move; appetite poor. About the sixth or seventh day they showed symptoms of weakness in the lumbar region, so that they tumbled or swayed here and there in their movements; most of them remained lying down the whole time, occasionally moving in a weak manner to the food-trough, where they often fell over from weakness. At this time the ears of some of the animals were red, *as in Rothlauf*, and all presented the symptoms of rapid and labored respiration; tremblings and convulsions were ob-

served in some of most severely prostrated animals. *The disease terminated in eight or ten days.*"

This clinical history would pass equally well for hundreds of cases of the American swine-plague, and with Roloff's observations in my mind, and Schütz conclusion that the lesions in the intestines, described by Roloff, most probably belong to schweine-seuche, whereas it is an almost absolute certainty that they belong to the regular swine-plague, led me to that opinion. An idea I do not now think correct, though I still more obstinately assert that there is no evidence showing that this disease (Hirshel's) had any relation at all to the one described by Loeffler, and also by Schütz in his first cases.

To continue with Schütz's observations and experiments upon this second lot of hogs: "It became evident to me," he says, "that the clinical history did not correspond either with the description of Rothlauf or schweine-seuche as given by Eggeling, and I must admit that I am still unable to explain away the contradictions."

"Necroscopical Notes of Swine, No. 1, from Putlitz, November 19, 1885. Outside of stomach gray-red, intestines bluish-red, veins of serosa, and subserous tissues engorged with blood, contents of the small intestines fluid, that of large intestine pulsatseous, the stomach contained a small quantity of cut up beets and some fluid strongly tainted with gall; the mucosa of the regio œsophagea swollen and gathered in deep rugæ, the greater part being deeply saturated with gall; the edge of the same bordering upon the lesser curvature was marked by two brownish-yellow spots of the size of a bean, which lay deeper than the surrounding tissue; these spots were sharply circumscribed, clouded and dry, their edges being but loosely attached to the surrounding and underlying tissues; the glandular mucosa of the stomach was gathered in numerous folds, and clouded the combs of the rugæ, being more or less gall-stained, while the spaces between them had an uneven surface, and were of a grayish-yellow color. In the place of the lymph-follicles small excavations were to be seen, having smooth, flat edges and a bluish base. The mucosa of the duodenum and the anterior portion of the jejunum somewhat swollen, some few of the smaller vessels being partially engorged; posteriorly, the mucosa was less swollen and pale; no changes in the Peyer's plaques or solitary follicles; mucosa of cæcum and colon clouded, bluish-gray in color, tending towards a green shade; mesenteric lymph-glands firm, of a bluish-gray color, and only moderately swollen; spleen but slightly swollen; liver swollen some, bluish-brown in color, firm, edges somewhat rounded; acini distended, their center portion being of a dark-brown color, while the peripheries were clouded and gray-brown; gall-bladder partially filled with a thickish, clouded gall. Kidneys not much swollen, gray-brown in color, surface smooth and refracting, medullary portion yellowish-red in color, while the cortical substance was gray-brown, slightly clouded, and marked by numerous engorged vessels. The pericardiac sack contained 36 grammes of a clouded-red fluid. Peri and epicardium coherent, which, when separated, showed the connection to be made up of an elastic tissue, the separated surfaces being dull and rough; myocordium of a greenish-brown color, somewhat clouded, but firm; cut surface dull. The lungs were large; both lobes of the left lung, with the exception of the superior edges, and the four lobes of the right lung dense and air less—hepatized; in both pleural sacks 64 grammes of a clouded, reddish yellow fluid mixed with flocculent

fibrin; the plural covering over hepatized portions was rough, lusterless and clouded, while the latter were of a general dark red color, with grayish-yellow and red centers scattered through them, and varying in dimensions; the superior edges of both lobes of the left lung felt soft, although they did not contain much air; the cut surface of the hepatized portions were greenish-red and reddish yellow in places, these latter being sharply outlined from one another, they corresponded to the circumscribed spots in the pleuræ, were very friable and but little lustrous, somewhat granulated, and occupied large sections, or were scattered in centers throughout the grayish-red substance; their limits corresponded to the course of the larger bronchi and vessels; the surface of the grayish-red parts was also granulated, non-lustrous and clouded; the interlobular tissue was infiltrated with a clouded reddish fluid; the pleuræ of the non-solidified portions of the lungs was smooth and transparent; bronchiæ-lymph glands swollen and dense, capsule reddened; parenchyma reddish gray, and swollen."

The second swine from Putlitz presented exactly the same phenomena. Of these cases Schütz says: "*Diese Falle bieten viel Bemerkenwerthes dar.*" These cases present much that is worthy of consideration, both swine suffered from an acute inflammation of the pleuræ and the lungs, and in hog No. 1 the inflammatory processes had extended to the pericardium. Then follows an exact description of the lesions in the lungs, and a critical consideration of the same, to which is appended this conclusion, which is of the utmost importance:

"On this pneumonia follows the phenomena of a general infection, which results partially by way of the lymphatics, and in part via the blood circulation; for the first speaks of the severe complication of the adjoining lymphatics, and for the infection of the blood the parenchymatous changes in the liver, kidneys, spleen and heart, and the irritation of the stomach and intestines."

Schütz then made a very detailed and exact bacteriological examination of the lungs of these two hogs, and says:

"In the lungs of both swine exactly the same results were ascertained; the bacteria being the same as those already found in the spleen, and in such numbers that the changes observed in the lungs must be attributed to them. I came, therefore, to the conclusion that the bacteria were taken up by the expiratory passages, and aspired into the finest bronchioles, and thus caused the pneumonia." . . . "The results of this laborious investigation was that the lungs contained the greater number of bacteria, the bronchial glands approximately the same, while the other organs contained proportionally few, which all speak for the primary invasion of the lungs."

"Although the bacteria found in the lungs of both swine corresponded in form to those discovered in the spleen (first examined), still that is not sufficient evidence to demonstrate the identity of the germs found in each case. *We also know that correspondence in methods of growth in cultures is not even sufficient to justify the conclusion that two germs are necessarily identical.*"

Cultures were then made from the freshest lesions in the lungs, and a number of small animals also inoculated with pieces of lung substance, viz.:

Six mice under the skin of the back.

Five guinea-pigs in belly.

Two rabbits in ear.

Two rats in abdomen.

Two pigeons and one hen in breast.

Several things are noticeable in considering the results of these inoculations:

1. While swelling at the point of inoculation is mentioned, no mention is made of "enormous œdema," which, if present, should have been so striking as to call immediate attention to it, if we can judge by Loeffler's experience.

2. Only three of the guinea-pigs died.

3. One pigeon died. (The hen did not.)

TWO MORE HOGS FROM PUTLITZ.

"On the 13th of December, 1885, Schütz received two complete cadavers from Herr Dr. Hirschel, of which one was a young hog; the other aged. (The outbreak had now continued over a month!)

"Necroscopical notes of the pig: The skin of the points of the ears and around the nasal openings and mouth, and the inferior portion of the abdomen and vicinity of the sexual organs, of a dark-blue color; on section, one only saw engorged vessels, out of which flowed fluid blood; at some spots, where the skin was very red, the skin and subcutis were infiltrated with a red fluid." (No mention of anything corresponding to Loeffler's "Enorm œdem," of which we read, "the skin of the abdomen, sexual organs, and along the neck livid red; enormous œdema of the skin of the neck and between the forelegs, extending along the abdomen.") The only other thing that interests us is the presence of pneumonia but no intestinal lesions, otherwise the same as the first pig. Schütz says, "as cause of death must be considered the multiple mortifying pneumonia, which caused the pleuritis and general infection."

"The previously detailed investigations demonstrate with certainty that a pneumonia of an infectious nature is caused in swine by bacteria which are identical with the oval bacteria. This disease has not only a scientific interest, but also highly economical importance, and I will not neglect to say that the veterinarians assert that about two hundred swine perished from this disease during the previous year, and that Dr. Hirschel asserts its general appearance among the swine of his district. This disease particularly attacks young swine, and most perish. Dr. Hirschel, to whom I sent the results of my observations, says that they correspond with his."

Schütz then quotes Loeffler's assertions as to the disease observed by him being a septicæmia in swine, or schweine-seuche, and says, "It is now proven that the disease caused by the oval bacteria, and named schweine-seuche, has no connection with Rothlauf, and is not a septicæmia in the true sense, but an infectious pneumonia. Hereby falls the assumption in the selection of the name as to whether the disease should be distinguished as 'schweine-seuche' or 'schweine-septicæmia.' Nevertheless, I prefer to retain the name 'schweine-seuche' for the disease in question, for, as will be shown later on, it has not been positively demonstrated that the lungs are the only atrium by which the germs enter the body."

"If the above-mentioned hypothesis is correct, that the germs enter the body via the respiratory tract, and there multiply and cause the mortifying pneumonia, then the artificial introduction of pure cultures into the lungs of healthy hogs must produce the same disease."

This was done on the 16th of January, at 1 P.M., a healthy hog receiving 1 ccm. of a bouillon culture in each lung. The animal died on the night of the 18th-19th of January. *No cutaneous œdema. Consolidated centers with pleuritis reported in lungs.*

The same bacteria found in tissues.

An inhalation experiment was next made with dried portions of the lungs of the above swine, rubbed up into a fine powder, the virulence having first been tested in two mice by the subcutaneous introduction of the same. This failed to infect a pig when his cage was filled with the powder blown into it. A bouillon culture was then sprayed into a cage containing another hog. This worked—killing in eight days; pneumonia resulting. *No œdema of cutis*. The second swine sent from Putlitz was also examined, and gave the lesions of a chronic, caseous destructive type in the lungs, often seen in prolonged cases of our American swine plague, and which are by no means necessarily due to infection by way of the respiratory passages, the same bacteria being found therein and in other parts of the body.

Here comes an interesting passage:

"Regarding the course of the Seuche in the possession of the dairy-owners, I will mention that with the beginning of cold weather no further cases occur, and Dr. Hirschel has communicated to me that the Seuche regularly comes to an end in winter, to develop again in warm weather."

"Hereby, we now know the cause of two generally extended diseases of swine, the Rothlauf and the schweine-seuche. The Rothlauf shows the properties of a septicæmia, the schweine-seuche on the contrary presents lesions very much resembling those of tuberculosis. At this moment the stages of the schweine-seuche have not been so exactly followed out that we can speak positively over all the properties of the same, and it requires a much more detailed investigation of individual cases. At present, I believe that the lungs of swine, as in tuberculosis, to be the general point of attack of the inficiens, and that from them the germs are dispersed over the body. This does not exclude the possibility of their gaining entrance some other way, as shown by the results of subcutaneous inoculations (in the first lot B). To the infection from wounds I would trace the infection in the case quoted by Lœffler, which was marked by enormous œdema. On the contrary, I am unable to bring the statements of Eggeling into conformity with my observations and experiments."

"I have previously mentioned that the picture which Eggeling gives for the Rothlauf bears a certain resemblance to that presented by the hog examined by Lœffler on October 26, 1882, for Eggeling says, that the skin under the neck is often swollen and painful, and markedly infiltrated with serum. It is singularly that Eggeling should describe these symptoms as characteristic for a pest-like disease among swine, and only speak of the lungs as œdematous. It must therefore be said that the disease described by Eggeling is not the one which must now be considered as schweine-seuche. On the contrary, I think it possible that it should be classed with the Rothlauf, which can only be decided by examining the blood and organs for the peculiar bacillus of that disease."

"An infection from the intestinal tract may be also possible. The results of feeding the blood and flesh of a schweine-seuche diseased swine, which were negative, does not speak against this possibility, for it is possible that the repetition of this experiment might lead to positive results. At this time, I desire only to call attention to a disease of swine described by Roloff as caseous enteritis, which he looked upon as tuberculosis, which, however, most probably should be classed with the disease process caused by the oval bacteria. He must not leave it out of consideration that the intestinal wall can be infected from the circulation, and as a consequence the caseous

condition of the intestines need not necessarily be attributed to bacterial pollution of the intestinal contents."

This last statement of Schütz has led to a very large amount of misconception as to what his "schweine-seuche" should be considered to be. It at first led me to think it was our swine-plague, a position I flatly contradicted in my full report upon the swine-plague of this country, though no less an authority than Prof. Welsh, of Johns Hopkins University, has said that I have introduced much confusion into the question by asserting the schweine-seuche to be identical with our swine-plague, an assertion which I flatly deny. When asked for proof Prof. Welsh refers me to "page 52 of my book on swine-plague, line eight from the bottom" where I do say "by the discovery of apparently the same germ as Schütz described," and again Welsh refers me to page 72, nine lines from the bottom where I say "and the germ first described by Schütz which I was the first to claim apparent microscopic identity for one found in the swine disease of this State" (Nebraska). The reader will see that I went no farther than asserting "apparent microscopic identity, a most dangerous thing to do if based on bacterial descriptions alone, between the germs described by Schütz and my own, but I most emphatically demonstrated the germs not to be identical by actual experimental inoculations in rabbits by the absence of œdema following the introduction of pure cultures. In my report on page 190, I ask the question "Is this schweine-seuche identical with the American, English, and Danish swine-plague?" To which I answer to my mind we shall find that the evidence given by Lœffler is most decidedly negative as regards the American plague, while that of Schütz tends partially in one direction and partially to the other, "referring to Roloff's cases. On page 196, respecting my inoculations in rabbits, purposely made to test this question, "no œdema present," and on page 198 I say:

"Now, why not swine-plague as we understand the term?"

"1. Because enormous œdema never occurs in that disease.

"2. Because the tendency to hemorrhagic effusion is not a constant phenomena in swine-plague.

"3. Because the intestinal lesions seem to be entirely wanting in schweine-seuche."

"Hence it seems as if our conclusion is correct that the organism discovered in swine by Lœffler, and the disease resulting therefrom has no authoritative bearing whatever upon the origin and nature of the cosmopolitan swine-plague."

My final conclusions, which I would only change in one particular were:

"These three German pests are:

"1. Rouget, Rothlauf, or erysipelas according to the literature.

"2. Wild-seuche. Lœffler's schweine-seuche and perhaps Schütz's first series.

"3. Swine-plague proper, which as far as the literature is concerned is made up of Schütz's pneumonia and Roloff's caseous enteritis."

Here I would change my opinion, and not include Schütz's "infectious pneumonia," but have that as an independent local, swill or filth infection and not a seuche or pest in any sense of the word. It is singular that while Prof. Welsh is so anxious to blame me with bringing confusion into this question, that the best German reviewers of my work have pointed out the fact most distinctly and with truth, that I positively denied the identity of the two dis-

eases, and that Welsh should pick out two brief remarks as to "apparent identity" between germs which, as Schütz says, amounts to nothing conclusive, and utterly neglect to notice the tenor of page on page of my book in which I most positively take quite the contrary position. However, the honesty, and impartiality of most American investigators or writers towards my work is as fully known as their biased partiality toward that issued by the government, which, thankfully for the welfare of the American swine interest, has been shown to be untrustworthy and not fulfilling the demands of most exact scientific investigation.

But it is with Schütz's work and conclusion we have to do at present, and to get as near the truth as we can regarding the swine disease in Germany, and as he has intimated that the lesions described by Roloff as "caseous enteritis" should be included in his seuche, it is now essential that Roloff's description be offered to the consideration of our readers, which I copy exactly as translated in my work on swine-plague, page 211.

"SCROFULOUS CASEOUS-ENTERITIS."

"This chronic enteritis, or inflammation of the intestines, makes itself manifest in the young swine which have been perfectly well since their birth gradually begin to emaciate, the skin becomes pale and uncleanly and the appetite diminishes. To these phenomena diarrhoea sets in, being at first moderate, but gradually increasing in intensity; the discharges are very offensive. The animals become emaciated, the back arched and back-bone prominent, flanks fallen in, abdomen tucked up in its posterior parts, but pendulous in its lower portions, though not so much so as when ascites is present. The appetite for solid food disappears, while thirst increases. In cases where the diarrhoea is violent, death results in the course of a few days."

The pathological changes, described by Roloff, in the large intestines are what directly interest us, as so far as known they have never been seen in any other disease than the genuine swine-plague. They are:

"The large intestines form a thick, dense pocket, the single convolutions being united together as a conglomerate mass, the surface showing the regular markings of the individual folds more or less distinctly. Upon the surface of the individual convolutes are to be seen flat protuberances, some of which are roundish, while others are quite oval, varying in size from a five-cent piece to a quarter of a dollar. These neoplasmata are surrounded by a slight ring of indurated tissue. Upon these protuberances are also to be seen still smaller vesicular projections, varying in size from that of the head of a pin to that of a pea, or numerous small clouded points. Between the convolutions may be seen the swollen lymph glands, which present an uneven surface to the eye of the observer. The external surface of the intestines shows, on many convolutions, large brownish spots, in which may be seen many small vessels which are distended in places along their course and marked by numerous extravasations. Other portions of the serosa presents centers of diffuse redness, while others have a yellowish shade, the balance being quite pale. The serosa retains its normal lustre upon the slightly-red and pale portions, but is clouded over the brown-red spots."

"By means of touch it is very easy to see that the increase in volume of the intestines is caused by a thickening of its walls, which at the same time gives

them a certain degree of inelasticity. These conditions are most marked in the reddened portions; the secondary, flattish, protuberances feel dense, while the vesicles upon them fluctuate on pressure. The individual convolutions may be easily separated as the mesentery uniting them is very friable. Between the convolutions, in the markedly hyperæmia connective tissue, are to be found the hypertrophied lymph-glands, many of which have a medullary character, while others have undergone caseation."

"The contents of the large intestine is, in general, represented by a small quantity of evil-smelling pul-taceous or fluid material which is mixed with other of firmer consistency, and is of a dirty greenish or brownish color."

"The ileo cæcal valve projects into the lumen of the cæcum as a long, dense, cylindrical body, its surface being of a leaden color and disturbed by numerous openings of the size of a pin's head, its free extremity being marked by ulcerations. The mucosa of the cæcum, in the vicinity of the valve, as well as along the colon, presents a very irregular surface and is full of patches of a grayish-black color and full of clefts which interrupt the consiguity of the surface; between these grayish-black patches the mucosa is clouded and of a leaden color, its surface being very uneven, while in other places it is smooth and retains its normal lustre, but has a sort of granulated appearance. The round or oval neoplasms, previously alluded to, present a center having either a grayish-black or quite black color, their surface being clefted and irregular, while their peripheries are less dark and of a dead-gray color, the clefts and irregularities being less and less marked as one approaches the circumference of these projections until at their extreme limits they have a finely granulated appearance. The thickness of these objects increases from their peripheries towards the center. The clefted tissue is dry and friable in the center, but more moist and consistent towards the circumference and still wants the tenacity of normal tissue. Sometimes we meet with clusters of these objects lying in close apposition, or they become confluent, forming a mass lying transverse or longitudinal to the course of the intestine."

So much for Roloff, and if the reader will refer to the original, he will find that the author writes as if describing lesions frequently met with in swine, and not an occasional occurrence. Again, if those interested will turn to my report, page 214, and to plates IV and V, they will see described and illustrated a case of American swine-plague so exactly corresponding in lesions to Roloff's description that either one would answer equally well for the other, and let it be said, that up to the present time we know of no other disease of swine in which such intestinal lesions occur than the American swine plague, though in a large experience one will meet with many cases in which they are absent, but never in a herd outbreak in which the disease has a duration of over five or six days, will it happen that cases approximating the above will not be seen. Let us now consider Schütz's second series of experiments as compared with the first and with Loeffler's.

As regards the history of the swine from which the first lot came, we have no description of their feed, or how they were kept, nor of the external phenomena presented by the animals, as only the stomachs, spleens and livers of three swine were examined, so that we know absolutely nothing of enormous oedema having been present, and we have seen also that it was not present in any of the subcutaneous inoculated animals, even the pigs, which is in marked

contrast with Loeffler's case. Again, the course of the disease was twenty-four, forty-eight, and thirty-six hours respectively, in the three experimental swine inoculated with pure cultures from the above mentioned organs, and as was to be expected, by any one of experience, not a single one of these three hogs presented any phenomena of pneumonia, and it seems as if we might also question the fact that if the original animals had had consolidated lungs that they would have been sent to Schütz with the other organs.

Formerly I thought the diseases identical, and all we miss is the "enormous œdema," but it must not be forgotten that in Loeffler's pig, inoculated with pure cultures from the first one, he speaks of "enormous œdema of the skin." It seems strange that if Schütz produced any such striking phenomenon that it should not have attracted his attention in as marked a manner as it did Loeffler. The most essential point, however, is the killing time, or the period elapsing between inoculation and death which corresponds, viz. : from twenty-four to forty-eight hours, and Kitt, a most reliable observer, says that the German "schweine-seuche has generally a course of from one-half to two days," and in another place, that the wild-seuche departs itself in swine as a highly acute disease having a course of from twenty-four to forty-eight hours." (Monatshefte für Thierheilkunde, Vol. II, pp. 93-94.)

Point No. 1. Here then we have a disease (perhaps two), with a clinical and experimental course of twenty-four to forty-eight hours, either characterized by enormous œdema, or some being present, Schütz, and in this character and by subcutaneous inoculations not accompanied by pneumonia. Regarding the Putlitz hogs, we have a clinical history which seems to have been utterly ignored by Schütz in drawing his conclusions.

2. We have a local cause, a disease occurring in a dairy, which is worth considering, and Kitt tells us (l. c.) that "for the etiology and prophylaxis of the German schweine-seuche it appears important that the greater epizootics (enzootics?) have been observed in dairies, and that the inficiens can increase in sour milk, and that such milk and swill give the chief occasion to infection," p. 94, l. c.

3. Dr. Hirschel reports the natural course of the disease to have been eight to ten days.

4. All four hogs sent to Schütz from Putlitz were diseased with extensive pneumonia, and none with enormous œdema.

5. It seems utterly incomprehensible how any person with any claims to being an exact and scientific experimental pathologist could have overlooked these facts, and above all have neglected to make the same kind of experimental tests in both cases, and also test inoculations with the cultures from the two different sources in the same way and at same time in hogs only.

Schütz did not do this, hence his work is unscientific and unreliable. With pure cultures from his organs of the first lot he made subcutaneous inoculations in hogs, and produced death, as said, in twenty-four to forty-eight hours, but with the same material from his Putlitz hogs he did not make a single subcutaneous inoculation in hogs; and, while he made intra-pulmonal inoculations and spray aspiration experiments with his Putlitz cultures, he did not do the same with those from his first hogs.

Hence, Schütz has failed absolutely in giving any exact scientific proof.

1. That the disease he studied was identical with that observed by Loeffler.

2. That the disease from which the hog died that he obtained his first series of organs from was specific pneumonia in any sense of the word.

3. That the Putlitz swine were diseased with a disease identical with either of the others; or, in fact, that his conclusion that it was a specific pneumonia, as he claimed was correct, for, if Schütz has had any experience in hog diseases whatever, he should know that any acute septicæmia of eight to ten days duration will lead to pneumonia from circulation disturbances in almost every case, and the more prolonged a case is over that time, the more severe and destructive the pulmonary lesions.

4. That Schütz gives no evidence, and there is none that can be produced to-day, which goes to show that Roloff's caseous enteritis has any relation whatever to the disease, or diseases, described by him.

5. Schütz seems to have forgotten his own assertion, "if now, the bacteria found in the lungs and those in the spleen of the diseased swine corresponded in form, or even in cultures, that does not prove them to be identical."

"So ging daraus noch nicht dass sie identisch waren." To the mind of every person competent to express judgment upon such a complicated question as we have before us, it must be self-evident that the testimony brought forward by Schütz does not justify the conclusion that the hogs examined by Loeffler and himself, or their experimental evidence indicates that the name "schweine-seuche" can at present be considered to represent one single disease, but that, on the contrary, the German evidence before us, in the most modern literature, indicates the presence of at least four different infectious diseases among swine in Europe, viz. :

1. Rouget, or Rothlauf, the idiopathy of which is not to be questioned.

2. The world-wide swine plague (hog cholera in the United States, swine fever in England, and swine pest in Denmark and Sweden.)

3. A disease, or diseases, caused by one or more of a class of pole ended, diplo-coccoid looking bacilli always occurring in connection with swill-feeding in some form or other, or with an undue amount of filth composed largely of animal refuse to which the name schweine-seuche has been given.

4. The disease known as "wild-seuche," which has a germ so nearly like those found in class 3 that at present we do not know of any reliable differential characteristics.

THE SO CALLED "WILD SEUCHE."

The more one ponders over the questions here brought to discussion, the more difficult it becomes to arrive at any satisfactory conclusion. Considering the very great number of laboratories in Germany, as well as other parts of Europe, fitted up more or less completely for the purposes of original investigation in questions of this nature; and especially bearing in mind the very large number of competent investigators, all of whom have greater advantages for work than any men in this country, it must be admitted that the German and European researches in animal diseases, especially those of swine, have been very poor, and utterly inadequate to what we have a right to expect. It has not been a scientific and exact study of these diseases as they should be investigated, but has rather been the laboratory investigation of a few diseased animals. So far as we know, very few trustworthy confirmations of Schütz's work have come from other investigators in other lands, and those of Blaisch and Fiedeler, far more extensive

and reliable than those of Schütz, while going to confirm his work as to bacterial etiology, actually contradict Schütz's assumption of the existence of a "seuche" or pest, and show most conclusively that it is connected with swill-feeding, and is entirely of local origin.

The only doubtful fact in the whole question is the place of the disease called "wild-seuche" in the category. The exact extension of this disease over Germany or Europe is by no means well established. That it is merely a local affair, and not a seuche, is also self-evident. One singular thing about the whole matter is that since Schütz's publication in 1886, I do not know of a single investigation or individual outbreak of this disease, though such may have occurred. Let it be understood I am not denying the existence of this disease. The question is, whether or not it was the disease studied by Loeffler and identical with that swine disease which observers speak of as killing in twenty-four to forty-eight hours. If this last disease exists in connection with swill-feeding only, and there is also a disease as described by Hirschel which has a general course of eight to ten days, and is characterized by pneumonia without intestinal ulcerations or neoplasms, then there are two different diseases having very similar but differently deporting germs. There is one fact which speaks most strongly against the identity of this wild-seuche with the swill or filth diseases, no matter how apparently identical the germs may be, and that is the conditions, so far as known, under which the wild-seuche has heretofore been reported to occur under natural circumstances. It was once considered to be anthrax, but in a negative manner, that is, by his inability to discover bacillus anthracis in connection with it, Bollinger differentiated the wild-seuche from anthrax, and established its idiopathy—1878. It is known to occasionally occur among the wild deer—hence its name—and hogs in the royal preserves of Germany, where it has sometimes caused immense losses, and has also occurred naturally in cattle, and is capable of extending to horses. In other words, it has heretofore been a local disease of animals in the places mentioned. It has been divided into three forms—the exanthematous or cutaneous form, the pulmonary, and intestinal, as these organs seem to be infected in a marked degree beyond the others, and as indicative of the locus of primary infection. The exanthematous form is especially characterized by enormous œdema and hemorrhagic œdematous infiltration of the cutis and subcutaneous tissues, but as to whether any of these forms are necessarily idiosyncratic is to my mind very doubtful, as it is probable that serious interference of the circulation and capillary embolism could cause either one, no matter in what way primary infection may have taken place. It is worthy of mention that the pneumonia in this disease is said to be fibrinous, and no attention has been called to any necrobiotic or destructive disturbances in the lungs, such as Schütz describes, which would be impossible if the course of the disease is from twenty-four to forty-eight hours, or even under five or six days; or, as Friedberger and Fröhner say, "the average duration is from twelve to thirty-six hours; minimum six hours, maximum three to four days."

To my mind the peculiar local origin of this disease, its lesions and clinical course, essentially and practically differentiate it from the "schweineseuche" as defined by Schütz, that is, "a mortifying destructive pneumonia."

The puzzling and open question is, What to do with the cases studied and induced by Loeffler, which in

their "enormous œdema" exactly fit into the exanthematous form of wild-seuche, and more or less with Schütz's first cases with some œdema and a like short course?

Has the germ of the wild-seuche been domesticated upon the farms or in the stables and hog-pens of Germany?

We cannot answer that question.

I have previously alluded to the fact that Schütz's method of experimentation in his two series of investigations was unscientific, and hence unreliable, because the same system of introducing the cultures was not adhered to in both cases. I am strongly opposed to Schütz's conclusion that even his Putlitz disease was necessarily a pneumonia, for, as already indicated, I can produce a pneumonia in hogs by the subcutaneous inoculation of our swine-plague germ, which, according to the duration of the disease, will fit in to either of Schütz's cases, even to his very chronic one. The introduction of the cultures directly into the lung is, in such diseases, an unnecessary and an unwarranted procedure; for, if a given germ will develop rapidly in the blood of a hog, even though not specifically pathogenic, it will cause pneumonia if introduced into the lungs direct. I am well aware that the majority of germs one finds will not do this, but such germs will not develop in the blood of the living hog. There is no question but what the Loeffler organism and Schütz's first germ would also cause pneumonia if introduced in the same way. On the other hand, we have positive evidence that they did not produce it when introduced subcutaneously. What we want to know is, what the Putlitz germ would have done used subcutaneously? and this is just what Schütz failed to demonstrate. It is well known, however, that cultures sent out by Schütz have utterly failed in hogs in subcutaneous injections, even though the smallest doses had all the virulence he claimed for them in rabbits. I have myself injected 3 ccms. of a pure bouillon culture of his organism into pigs three months old subcutaneously, and even failed to have any severe effect when introduced directly into the lung. I am informed that Schütz failed with his germ in England, and know that Baumgarten also failed with cultures direct from Schütz's laboratory.

There is more in these bacterial tests than most people wot of. There is not the exact control of virulence between given doses in small animals of a given germ and the same germ in larger doses in hogs. Something, I do not know what, is lost in time so far as the hogs are concerned. For example, I can select an outbreak of our swine-plague in which 1 cubic-centimeter of a bouillon culture, first generation, will kill nearly every hog it is injected under the skin of, no matter how large the number may be, and all shall be terribly ill. A given dose of that same material will kill a rabbit, or any number of rabbits, in about three and a half days, and continue to do it in any generation (I can speak for the one hundred and fortieth); but pigs will now successfully withstand three times the amount that would kill or sicken every hog in one-third the amount in the first generation. This I know and can demonstrate at any time, and have done so time and again. The very same thing must have occurred to Schütz, or else he has not had the same germ in every case. I am perfectly convinced that there are several germs occurring in hogs that cannot be positively distinguished from one another, or from the culture of the Schütz germ which I had, either by the microscope or in cultures—a matter which will be referred to in

detail when I come to report my own investigations upon this subject. For small experimental animals it seems as if the virulence of these germs and our swine-plague can be kept up at one standard indefinitely, but that this cannot be done in the same manner for hogs.

I think that in Schütz's interpretation that his disease is primarily a pneumonia, and that generalization of the germs takes place from the lungs, is absolutely erroneous, and that, as he first concluded, the disease is pathogenically a septicæmia, no matter how the germs are introduced.

THE NAME "SCHWEINE SEUCHE" WRONGLY
SELECTED.

The reader must have been convinced from the careful consideration of the foregoing that the Germans actually knew very little of a positive and exact scientific character of the infectious diseases to which their swine are afflicted. We have seen that Schütz did not accept Eggeling's differentiation between Rothlauf and schweine-seuche, and that not one single veterinarian whom Schütz speaks of or quotes knew the difference, for all the swine or pieces of such sent to Schütz were sent in as from a "Rothlauf ähnliche krankheit," or as "Rothlauf erkrankt," that is a disease resembling Rothlauf, or that disease itself, and the most recent literature shows the same uncertainty. It is also a well-known fact that up to the year 1886, when Schütz and Loeffler published their investigations on Rothlauf, that the whole world thought there was but one common swine plague, these researches being the cause of the differentiation of Rothlauf as an idiopathic disease.

This disease being here established as a pathological entity, Schütz, following Loeffler, discovered these other germs in hogs supposed to have the Rothlauf by the country practitioners, and as he proved these germs to be specifically pathogenic in hogs, it is self-evident that as hogs were dying in Germany with somewhat similar symptoms, that Schütz assumed them all to have the same disease, and on account of its wide distribution called it the "schweine-seuche," an absolutely unwarranted conclusion and nomenclature. There is a vast difference between a wide extension and wide distribution. The word "seuche" in good honest, old-fashioned German means a pest or plague, a disease which sweeps, and a disease not due to local causes, but a general and widely-extended cause, such as the lungen-seuche (pluro-pneumonia), the rinderpest, the Asiatic cholera, the small-pox as it used to be, the horse disease in this country in 1872, la grippe as it was last year. A disease occurring in various localities is widely distributed but not extended, though killing thousands of individuals every year, as pneumonia cannot be said to be sweeping in character, and hence, cannot be justly termed a plague. We do not even give that name to tuberculosis, the most widely extended disease of mankind, because, though it is the cause of death of two-sevenths of the reported causes in the vital statistics of civilized countries, still it has never had, and never will assume, a sweeping or pestiferous character, carrying off people by the wholesale. We have epidemics of typhus abdominalis of diphtheria, of scarlet, but terrible as is the mortality accompanying these diseases at times, they never rise to the dignity of a plague. Neither the wild-seuche, anthrax, or this so called schweine-seuche, as a whole, arises to the dignity of a sweeping plague. See what Schütz says,

"that the veterinarians report a loss of two hundred swine, valued at \$1,500, the previous year." Two hundred swine! Does that look like much of a plague? Let us take a look at the last Annual Report of the Extension of Animal Pests in Germany, 1889, and see what it says. It speaks of two pests, the Rothlauf and schweine-seuche, and says, "the last is not so widely extended as the first," but it is self-evident that they know little or nothing about it. In Prussia, only 1,429 hogs are reported as having died, which is far too small a loss to be considered correct, but gives evidence that no plague existed; while in Baden, where the statistics seem to have been better collected, the whole number of swine, nominally reported to have had the Rothlauf, was only 3,014, of which 946 died a natural death.

Now, compare this with the loss in this country the past year, which surely did not amount to less than \$30,000,000, and most probably far exceeded that sum. Let me speak of events I personally know of. One man lost 2,985 hogs out of 3 lots in close proximity containing 3,135, and hundreds of farmers lost hundreds of hogs each; in fact, I have such a terrible array of losses this year in my records that I am loth to publish them, but never in its history has swine-plague swept from Ohio to Missouri with greater virulence than during the fall and winter of 1890 and 1891. This is what I call a plague, but I do not call a disease a plague which is due to local causes, and only occurs in connection therewith, no matter how many hogs it may happen to kill off. One might as well call a case of local poisoning a plague as to give the name schweine-seuche to the disease, or diseases, studied by Schütz. Then consider his material, the stomachs, livers, and spleens of three hogs, and four whole cadavers, that is the "grossartige materiel" as Schütz calls it in one place. Studied in Berlin, too, without an iota of personal investigation of the disease as it occurred in nature. I wonder what Schütz would think of some 2,800 autopsies, representing about 2,000 outbreaks, and cultures made more or less extensively from the organs of the majority, and observations made in various parts of four States, any of them larger than Prussia, and, for aught I know, as big as all Germany, and none of these made on organs sent in, but the majority made on hogs purposely killed, and all upon hogs in the midst of outbreaks in herds of seldom less than 100 hogs, and this does not include innumerable organs sent to me by express from different parts of the country, also representing diseased herds, of which I have a record that need not be introduced here. To investigate an animal disease properly one must go out where the animals are, and live among them, and study all the conditions which support the disease, and work against it. Animal disease can never be studied properly in a laboratory situated in a large city. One could not study our swine-plague at the Chicago stockyards, even though he could obtain thousands of diseased hogs a year. To be sure, he could study the lesions and bacteriology of the disease in a most satisfactory manner, but that alone would not prove the most unimportant phenomena connected with the disease. The clinical history, the manner of care and feeding, the influence of climatic and telluric conditions, of transport, of the ways of extension over the country are fully as essential points, and those upon which practical hygienic prophylaxis must be based, but they would be still a sealed book to the investigator working in a city laboratory.

Another thing of importance with reference to Roloff's intestinal lesions is, that Peters, one of the

most experienced veterinarians in Germany in daily practical observations among live stock in the country, says, in a recent publication, that he has met with far more cases in which the pneumonia was accompanied by intestinal lesions than with pneumonia alone, which is what Schütz asserts his seuche to be, and, as I have said, we have no evidence that these intestinal lesions occur in any other swine disease than the genuine plague.

MYOPIA IN THE SCHOOLS OF CINCINNATI.¹

By FRANCIS DOWLING, M.D.,
CINCINNATI, OHIO.

DURING the past year I have examined 1,000 scholars in the private and public schools of Cincinnati, with a view to determining the percentage of near-sightedness among the pupils, and the principal causes that give rise to the trouble.

I found, in summing up, that out of the 1,000 examined, there were something over 300 who were more or less myopic. Of course, in the majority of these cases—probably in 70 per cent.—the cases were of a low degree; but then the school grades in which they were found were principally in the elementary divisions, and, as I went upward in the school grades, I found that there was a much larger percentage of the higher degrees of the disease.

In a small number of the cases examined I found that one eye was normal and the other eye myopic; but in the great majority of cases both eyes were affected, although often in different degrees.

Several of the private schools for young ladies were first examined, with the following general results:

PRIVATE SCHOOLS FOR GIRLS.

	Age.	Myopia, per ct.	Heredity, per ct.
Mad. Fredin's,	15 to 18	16	8
Mt. Auburn Young Ladies' Institute,	15 " 18	20	6
Dr. Bartholomew's,	14 " 18	14	2

These private schools for girls were, as a general thing, better lighted, better ventilated, and generally in a better sanitary condition than the public schools which I examined. Then, too, there seemed to be a more intelligent distribution of the tasks and number of working hours to suit the individual aptitudes of the scholars. In most of the private schools the pupils were discouraged from studying their lessons at night time; and, where it was found necessary to do so, the best contrivances for furnishing artificial light were in use.

Among the private schools which I visited, the Mt. Auburn Young Ladies' Institute is particularly worthy of mention as a model of wholesomeness; the ventilation and light there were as near perfect as possible.

The following table shows, in a general way, the findings in the two large musical schools of Cincinnati, as well as in the art schools:

	Age.	Myopia, per ct.	Heredity, per ct.
Conservatory of Music,	16 to 20	56	10
Cincinnati Art School,	14 " 20	42	12
Cincinnati College of Music,	14 " 20	40	15

The highest percentage in the art school was found in the classes where the fine shading is done, and the lowest in what are called the life classes, or the classes composed of scholars who draw and paint from life.

In the Conservatory of Music and the Cincinnati College of Music, the very high percentage of myopia is due to several causes; the principal one is, in my opinion, that the majority of pupils who come to these institutions to study and fit themselves for teachers are persons of limited means, who feel that they are compelled, for this reason, to crowd about two years' study into one; and, in order to accomplish this, they have to study all day and part of the night; consequently the eye-sight of many of them is ruined by the time they finish their studies. I think the blurred, indistinctly-written notes that they often read their lessons from furnish another cause for this large amount of myopia. The college authorities ought to look into this matter and forbid the use of any but well-printed, legible notes for use in the College of Music.

Contrary to what I expected, I found the Southern girls among the most industrious pupils in the College of Music, and there was a correspondingly large amount of myopia among them.

In my examinations in the public schools I found that there was scarcely any myopia in children under nine years of age; and this tallies with the findings of Cohn, and others who have given attention to this subject. Most very young children were, on the contrary, hypermetropic, owing, probably, to an undeveloped state of the globe of the eye.

I give here a few tables showing the state of things in the schools, and begin with the scholars in two of the best ventilated and best lighted of the newer buildings.

PUBLIC SCHOOLS.

28th District.	Ages, 9 to 10.	Ages, 10 to 11.
German.	Boys, 9 per ct. Girls, 6 per ct.	Boys, 9 per ct. Girls, 12 per ct.

WINDSOR STREET SCHOOL.

22d District.	Ages, 10 to 11.	Ages, 11 to 12.
English.	Boys, 10 per ct. Girls, 15 per ct.	Boys, 15 per ct. Girls, 20 per ct.

22d District (Int.).	Ages, 10 to 11.
English.	15 per ct.
German.	24 per ct.

22d District (Int.).	Ages, 11 to 12.	Ages, 12 to 14.	Age, 15.
English.	Boys, 6 per ct. Girls, 18 per ct.	Boys, 20 per ct. Girls, 30 per ct.	Boys, 18 per ct. Girls, 36 per ct.

22d District (Int.).	Ages, 11 to 12.	Ages, 12 to 14.	Age, 15.
German.	Boys, 12 per ct. Girls, 40 per ct.	Boys, 30 per ct. Girls, 30 per ct.	Boys, 36 per ct. Girls, 42 per ct.

Here I wish to give the percentages in two of the old, badly-lighted and worse-ventilated schools in the crowded down-town districts; the last of these, the old 13th District, is a disgrace to the city, and ought to be abolished for school purposes. In the majority of the rooms of this school, in addition to poor light, the desks were so badly arranged that the little children were found trying to write in their copy-books in the shadow formed by the hand that held the pen.

2d District.	Ages, 12 to 14.	Ages, 12 to 14.
English.	Boys, 24 per ct.	Girls, 48 per ct.

2d District.	Ages, 12 to 14.	Ages, 12 to 14.
German.	Boys, 36 per ct.	Girls, 54 per ct.

13th District.	Ages, 10 to 12.	Ages, 10 to 12.
German.	Boys, 54 per ct.	Girls, 72 per ct.

¹ A paper read in the Section on Ophthalmology of the American Medical Association at its Forty-second Annual Meeting, at Washington, D. C., May 6, 1891.

In all the examinations in the public schools, I found a very much larger percentage of myopia among the girls than among the boys. This is probably owing to the fact that the girls, in addition to their regular school tasks, do a great deal of near-work with the eyes at home, such as sewing, etc., which the boys escape.

The German children had a much larger share of myopia than those of English or Irish parentage. This I attribute to three causes:

1. There is probably something inherent in the German organism that predisposes to the disease, probably owing to the naturally studious and thinking nature of the individual.

2. In our schools the German children, in addition to the regular prescribed English studies, have German as an additional labor.

And, lastly, the German text-books still retain the old crooked German letters, which are extremely fatiguing to the eyes.

And right here I must express my astonishment that our school boards do not immediately cause these letters to be banished from the school books, and substitute the Roman text, which are less fatiguing to the eyes. In progressive Germany this was done years ago, and now all scientific works in that country are printed in Roman letters. In a series of experiments which I made during my examinations, I found that the German letters were almost twice as fatiguing to the eyes as the Roman letters of the same size in the same text-books. The ratio stood as seventy seconds for the German letters and one hundred and twenty for the Roman letters.

As a result of my examinations in our schools, and some additional observations that were made in Germany and France during the years 1883 and 1884, the following facts were brought out concerning the development of myopia.

1. There is often a predisposition on the part of the individual, inherited or otherwise.

2. The trouble commences to manifest itself about the ninth year, and from this time on, until the eighteenth year, makes its greatest progress.

3. The disease increased, both in frequency and degree, as one goes from the lower to the higher classes in the schools.

4. That the German children have a greater tendency to the disease than those of the English-speaking parentage, and in this connection I would state that I witnessed proportionately more cases of myopia in Germany than in any other country which I visited in Europe.

5. Bad light and bad ventilation serve to materially increase the percentage of cases and their degree in schools. This was very forcibly illustrated in the very much lower percentage which I found in my examinations in the newer schools of our city, and the much larger percentage and the higher degrees of cases found in similar grades in the old, dark schools, which are known as the down-town districts. In speaking of this question of old school houses in their relation to the causation of myopia, Florschütz says that the number of myopic pupils fell from 21 to 15 per cent. three years after the building of the Coburg schools according to hygienic principles; and Vonhipple, in an address at the anniversary of the foundation of the University of Geissen, made the statement that he found only 34 per cent. of myopia in the new schools of Geissen, compared with 40 per cent., which was the usual average in the old buildings.

Lastly, the bad condition of the black-boards in many of the schools contributes largely to the causation of myopia. In many of the old buildings which I examined, these boards were in a demoralized condition—the slating in places was worn off in large sections, rendering it very difficult to read the writing.

As a result of all the information that I have been able to gather in regard to the various points that enter into the causation and development of myopia in general, and more especially in its relation to the schools, I would make the following suggestions as a means for abating, in a measure at least, this growing evil:

1. The appointment of a competent medical officer, who should have complete control of the sanitary regulations of our schools; should have charge of regulating the tasks for the children, the number of hours for study, etc., according to the physical aptitude of the individual; and in this connection I must say that in my opinion the present system of like tasks and number of working hours for all pupils alike, in the same grades, irrespective of the physical and mental powers of the individuals, is very unjust and unwise, for the reason that those who inherit weakly constitutions and weak eyes, etc., will necessarily be at a disadvantage in their endeavors to keep abreast of those who may be naturally endowed with stronger eyes and stronger physical powers.

Teachers witness examples of this every day in our schools, and many of the broken-down constitutions and bad eyes of later years no doubt trace their origin to over work during these very school days.

The medical officer whose appointment I have suggested should be a man of the highest and broadest intelligence, and should be entirely free from all political manipulations and cliques of whatsoever kind. He should, among other things, be consulted in the drawing of the plans of all new school houses about to be erected; should be invited to make suggestions in regard to the construction of such schools, with a view to getting the best advantages in them of light, ventilation, etc.

2. The sanitary condition of our schools should be first-class in every way; ventilation, light, etc., should be as near perfect as possible, and our school boards should spare no expense in keeping up this condition of things, for it has an immense influence for good, both on the condition of the eyes as well as the general physical condition of the scholars.

3. Whenever the system of one affected with or predisposed to myopia becomes at all relaxed, all work with the eyes should be suspended until the health is again entirely restored to its normal condition, for it must be borne in mind that it is during lowered conditions of the system that certain forms of myopia make their greatest progress. In this connection it will not be out of place to state that a large percentage of the cases of myopia that came under my observation, particularly in the clinics of Germany and France, were among subjects burdened with some constitutional taint, such as the tuberculous, scrofulous, etc., owing to which the powers of life were usually below a healthy standard, and this in itself, as is well known, plays no small part in furthering the development of the myopia, and singularly enough it is especially during the years that myopia usually makes its greatest progress—viz.: from the tenth to the twentieth year—that tuberculosis and its near relation, scrofula, make their greatest advances.

Therefore, the condition of the general health of a young myope, should receive the most careful attention on the part of the medical adviser.

4. The books from which one predisposed to myopia should study ought to be printed with tolerably large type, and the Latin letters are the best of all others, as being less fatiguing to the eyes than the German, etc.

5. In reading, writing, etc., the eye should be kept at a distance of about thirty centimeters from the text, and the reading, etc., should be frequently interrupted, so as to rest the eyes. They should be closed for five minutes or so at a time, or directed at some far away point.

6. Young persons predisposed to myopia should not study at night time, and all near work with the eyes should, when possible, be done by good clear sunlight.

7. The so-called shading and tinting in the drawing department of the schools should be entirely dispensed with, as examinations show it to be very injurious to the eyes of the pupils, and a large percentage of our scholars have to be excused annually from doing this kind of work.

8. For those scholars who study German, a corresponding number of other studies, as for instance music and drawing, should be cancelled, so as to equalize things in the way of labor, between the children in the English and German departments. In making the suggestion I do not do so as a crusade against the German language, *per se*, but rather with the object of giving the German children a much needed rest for their eyes at a time when they very much need it. I think of all the foreign languages a knowledge of the German would be, for many reasons, the most desirable for the scholars in our schools. Still I am of the opinion that the study of this, as well as other foreign languages should be relegated to the high schools and colleges, where it would not absorb the time that the children so very much need for the study of the ordinary English branches.

9. In cases where the myopia is at all pronounced, all near work with the eyes, such as study, etc., should be postponed until the sixteenth year. The child should, if possible, be sent to live in the country where the range of vision is longer than in the city, and then it should be kept out doors, in the fresh air, as much as possible.

10. The wearing of glasses by a myope is optional, at least for distant vision, as they have little, if any, influence in checking the progress of the affection. They are only useful as a means of enabling the wearer to recognize more clearly his surroundings, and when worn, should be of a weaker refractive power than that necessary to correct the actual degree of myopia present. If, however, the myopia is beyond a certain degree, any three dioptrics, then the use of proper concave glasses for reading, and all other near work, may limit in a measure the progress of the disease, by relieving the strain on the muscles of convergence, and in this way lessening the tension on the globe of the eye, which is one of the great factors in furthering the march of the affection.

11. In tolerably high degrees of myopia I have found paracentesis of the cornea, by means of a fine needle, to do a great deal of good. It removes the intraocular pressure that is often very marked in such cases, and thus retards the progress of the myopia; then another thing, it lessens the chances of detachment of the retina, which so often takes place in high

degrees of the affection. In practicing the operation, after making the puncture in the cornea, I usually cause the fluid to escape from the anterior chamber slowly by pressing on the cornea, alternately with the lower and upper eyelid. Twice a week is as often as I practice this treatment in any given case. The great advantage in letting the fluid escape slowly, is that the shock to the eye is not as great as when it is emptied rapidly.

SIMULATION OF MULTIPLE CEREBRO-SPINAL SCLEROSIS BY LA GRIPPE.

By S. V. CLEVENGER, M.D.

A SWEDISH sailor living under rather insalubrious conditions, during the course of an attack of the prevalent influenza, developed incoördinate symptoms and paraplegia, which caused his physician, Dr. Whitnall, to call me into the case. I found the patient unable to walk from an incomplete paraplegia (paraparesis), without anæsthesia. There was marked nystagmus previous to my seeing the sufferer, which had improved at the time of my visit, a week after it began, and in the second week of his sickness. The intentional tremor of the head, neck and arms was precisely what is seen in advanced cases of multiple cerebro-spinal sclerosis, but owing to its having suddenly appeared I decided against the probability of the real disorder existing, and regarded it as of purely functional origin, predicting recovery, which fully occurred in a month, but another month still was required before he fully recovered from the exhaustion following the disease.

Landon Carter Gray in Sajous' Annual, 1891, refers to a recent case of functional simulation of multiple sclerosis cited in the *Montpellier Medical*, and previous instances reported by Westphal, Maguire and Bobinski. Hysteria in my case could be absolutely excluded.

CHICAGO, ILL.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

THE time of appearance of the eye teeth averages eighteen months, almost to a day. Some children have flatulence, constipation, convulsions, etc., at the time of dentition; these are due, not to dentition, but to the changes in the food which take place about that time.

The fever of dentition is relieved by hot or cold bathing, or by drop-doses of aconite, which will probably tide over the period of irritation which comes with dentition, and will prevent convulsions. If convulsions are imminent, give small doses of bromides.

—Hollopeter.

The most prolific exciting cause of aneurism is violent, sudden effort; heavy lifting, long-continued effort is not so likely to produce it.—Anders.

If gonorrhœa lingers beyond twelve weeks, there is always found a damaged portion of mucous membrane. This is incipient stricture; there is first a granular urethra.

Where gonorrhœa in the female is confined to the vagina alone, it may be quickly cured by applying powdered tannic acid until it almost completely fills the vagina. If there is inflammation of the cervix, plug up the neck of the uterus with cotton bathed in iodoform and glycerine, and apply tannic acid to the vagina as above.—McConnell.

When doubtful as to whether an abdominal tumor is attached to the uterus, have an assistant draw the tumor up into the abdomen, and another draw the uterus down with forceps. If the uterus is attached, you will find that it cannot be dragged downward without dragging the tumor with it.

—*Montgomery.*

FOR ECZEMA AND ALL SKIN IRRITATIONS IN INFANTS:

R.—Ac. salicylic gr. xx.
Zinci oleat..... ʒii.
Cocain gr. v.
Pulv. amyl., q. s..... ʒii.

M.—Sig. Use as powder, externally.

Salicylic acid prevents fermentative changes in the skin; oleate of zinc adheres very closely to the skin, and protects it; the cocaine may be put in or left out, according to whether there is pain or not.

If, on the second visit, there is little pain, and the scales are drying up, the cocaine may be discarded; later, the zinc may be left out, then the acid, so that finally only the starch is left. After this, alcohol may be used.—*Hollopeter.*

Carbolic acid, as an antiseptic agent, must not be used in a solution weaker than 5 per cent. Less than this may keep the germs from growing, but will not destroy them. It will, however, destroy the pus germs.—*Laplace.*

Heart-burn is caused by an acid condition in the stomach.

The stomach of a new-born babe is alkaline. The moment it becomes acid, we have troubles with the mouth—stomatitis. In this case, the alkaline secretions of the mouth change to acid, and fermentative changes take place.—*Hollopeter.*

Never use sulphur externally, on the surface of the skin, where the glands are open, as it will collect in the glands and give the appearance of gunpowder on the skin.—*Shoemaker.*

To differentiate between epithelioma and lupus at their onset: The papules of lupus are multiple and small; the papule of epithelioma is larger and single.—*Shoemaker.*

Syphilis, in all its stages up to a certain point, is a constructive metamorphosis. In other inflammations of lymphatics there is not the hard feeling; the inflammation is not a constructive inflammation.

—*McConnell.*

None of the physiological secretions of a syphilitic, as the tears, saliva, milk, semen, etc., will give rise to syphilis when uncontaminated. The blood will give rise to it.

Patients who have been syphilitic and have been cured, do not take the disease again when inoculated; however, like other diseases, this immunity wears off, when, if the patient exposes himself, he may again get syphilis, which contraction of the disease a second time, is proof that it was cured at first.

If the father alone has syphilis, it cannot be transmitted.—*McConnell.*

DIFFERENTIATION OF CATARRHAL CONDITIONS OF LARGE AND SMALL INTESTINE, AND TREATMENT.

When the duodenum is affected, we have some jaundice and constipation; furred and flabby tongue; tenderness beneath the right costal border, a little to the right of the median line, clay colored stools.

Pain in the middle of the abdomen indicates an affection of the small intestine; and when so situated, the abdomen about the umbilicus becomes distended and prominent.

We cannot, in all cases, tell whether the disease is confined to the rectum or affects the whole of the large intestine. When the evacuation consists just of mucus and blood and there is a great deal of tenesmus, we may say the disease is of the rectum, but when the discharges are mixed and contain other matter and are hard and scybalous, we may say that the trouble is in the large intestine.

Treatment: Regulate diet. Food should be such as is principally digested in the stomach and should be taken at regular intervals. Insist on cleanliness, with massage of the skin. When possible, give rest and change of air.

In medication begin by getting rid of the mucus which is always in the intestinal tract. When the large intestine is implicated, give injections of warm water, once or twice a week. For the catarrhal condition give subnitrate of bismuth in large doses. If there is pain, give with it some preparation of opium.

When emaciation has progressed considerably, give tonics. A good way to do this is to use a preparation of arsenic in small doses on an empty stomach. One or two drops of Fowler's solution, before meals, well diluted, will build the patient up, and acts well on the local catarrhal condition. Nitrate of silver is an alternative, as well as a local heater, and may be given when subnitrate of bismuth does not act.

Also we want to give iron, but these patients are often bilious, in which cases iron will not act; therefore, before giving iron, give strychnine for a short time, four or five days, keeping the bowels regular, after which we may give the vegetable salts of iron with some such preparation as tincture of gentian.

If remedies do not act, advise a change of residence to the region of the natural mineral waters.—*Anders.*

SPUTUM AS A DIAGNOSTIC SIGN.

In phthisis we have nummular sputum; looks like coin; which floats in a clear liquid.

In measles we have nummular sputum, which floats in an opaque liquid.

In bronchiectasis there is stinking sputum; also in fibroid phthisis we have stinking sputum.

In cancer of the lung, we have sputum that looks like currant jelly.

In pneumonia, we have rusty colored sputum.

In œdema of the lung, the expectoration is serous.

Where we have pneumonia terminating in gangrene of the lungs, the sputum is exceedingly fetid; greenish or brownish.

The sputum of chronic bronchitis, when associated with disease of the heart, looks like the white of egg mixed with water, and may amount to a quart or half gallon in twenty-four hours.

The sputum of chronic bronchitis, when not complicated is large, broad and irregular, and is greenish or yellowish.—*Morris.*

ALBERT FINCH, of Rockport, Indiana, son of an army surgeon, has evinced a wonderful taste for the study of anatomy, and though but five years old he is said to possess a knowledge of the human structure that is really amazing. It is stated that he is an honorary member of the Southern Medical Fraternity. He is known among his friends as "Dr." Finch.

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RESPONSIBILITY OF THE INSANE.

THAT there are degrees of insanity no one presumes to deny. From violent delirium to the shadowy region in which the highest expert skill is unable to decide between sanity and insanity, there is to be found an unbroken series of cases. But in the eye of the public, accustomed to deal only with elementary colors, the question in each case is the direct one: Is he sane, or is he insane? And upon this view is based, not only the popular, but even the legal, theory of responsibility. Let a man be proved to have ever so slight an aberration from mental soundness, and he is thereby privileged to go up and down like a raging lion, working his own will, without the restraint of law, until he has committed some overt act to justify the community in shutting him up in an asylum for the rest of his life.

Nevertheless, there is nothing in the history of clinical insanity to justify such a view. In the asylum lunatics of all grades are brought under discipline. They are taught the necessity of obedience, to respect authority and the rights of others. They comprehend in nearly every instance that infraction of the laws will bring unpleasant consequences upon the culprit; and the consciousness of this exercises a deterrent influence upon them.

But what would be the life in an asylum, if the doctrine of non-responsibility were applied as it is in the courts of law? In fact, the subjection to discipline is one of the first and most essential steps towards the restoration of the patient to the control of reason.

We may claim, then, that the experience of asylums bears out the assertion that, as there are varying degrees of mental alienation, so there are varying degrees of responsibility attaching to the lunatic. There is no more dangerous man than the one who has a slight mental twist, and is aware that he is relieved thereby of legal responsibility. In fact, it would be

better on the whole if insanity were not to be admitted as a sufficient defence, instead of the ultra sentimental view that prevails to-day.

INOCULATION OF CANCER.

THE reckless experimentation upon human subjects with tuberculin, before it had passed through the proper laboratory investigations, has induced a disregard of individual human life that is becoming manifest. When a government seeks to justify a war, the ultimate good of the community at large is pleaded in extenuation of the sacrifice of individual lives and property. If this be a legitimate excuse it would go far to excuse a great deal of experimentation in matters medical. But the world has not accepted this view as yet, at least in England and America, hence we are not surprised at the universal reprobation expressed in the English journals concerning the action of a European surgeon.

At a recent meeting of the French Academy of Medicine, M. Cornil presented a communication, stating that it was made by a foreign surgeon whose name was withheld. In it two cases were described. The first was that of a woman from whom the surgeon removed a cancerous breast. Beneath the skin of the other breast, as yet healthy, a small piece of the cancerous tissue was inserted, with strict antiseptic precautions. The patient being still under the anesthetic was unaware of the experiments to be performed upon her. The graft took effect, an indurated nodule followed, and in two months it had grown to the size of an almond. This was removed, and on microscopic examination presented the characteristics of the original growth in an active state of development. Shortly afterwards the patient died of an inter-current malady, and at the autopsy no trace of secondary cancer was found in her viscera. This proved that cancerous tissue could be transplanted from one portion of a patient's body to another. To show that this tissue could be transplanted from one person to another, a second operation was performed. The cancerous tissue was in the same way transferred to the body of a person previously free from cancer; and again the graft retained its vitality and a cancerous nodule resulted. This patient, however, refused to allow the surgeon to remove the nodule, and left the hospital, to die of cancer, intentionally implanted in her body to decide a moot point in pathology.

No pretense can be made that by this shocking crime there will be the slightest advance in the treatment of cancer, and that thus one woman's life has been sacrificed for the salvation of others. The question even yet has not been settled, and the experiments were worthless. Every one knows that the elements of cancer spread along the lymphatics, and hence give rise to the disease at a distance from the original site. It is likewise a matter of universal cognizance that grafts from one portion of the body may be transferred to another part, and flourish in the new site. As the fragments of cancerous tissue must contain also some of the normal tissues of the body, these would, as a matter of course, retain their vitality and pre-

serve the contained cancer elements alive. This experiment does not prove any new thing whatever.

To the credit of the French Academy be it said, this heartless recital did not go unproved. Le Fort entered an indignant protest against this unwarranted action, involving a betrayal of the patient's confidence by taking advantage of the anesthesia to make an experiment that is a disgrace to the surgical art. In 1888, the Society of Biology refused to hear a similar communication, suspended the sitting, and enjoined secrecy with respect to facts that were unanimously allowed to be dishonoring to the art of surgery.

Letters to the Editor.

ADVICE WANTED.

I HAVE a patient with the following symptoms : A lady aged twenty-four years, married and has two children, aged three and five years ; has never miscarried ; urination somewhat painful ; has weak back ; pains under left shoulder-blade ; cold feet and hands at times ; has pain at times when bowels move ; bowels tolerably regular ; digestion not good though ; has shortness of breath ; severe palpitation and soreness over the region of the heart ; has some vertigo and bad taste in mouth ; vertigo and blind spells ; windy risings ; and, at times, she becomes powerless : cannot move a single limb ; says that she knows all that is going on, but cannot speak or move ; these spells last from twenty minutes to one hour. Each time she stoops down she has a severe heart flutter. She is three-and-one-half months gone in pregnancy.

J. MORGAN NUNEZ.

COVENA, GA.

[Examine the urine for albumen and the heart for dilatation. Give diuretics, cardiac tonics, etc. Spar-teine in doses of gr. $\frac{1}{2}$ every four hours would prob-ably give good results.—ED.]

FOR TONSILLITIS.

ALLOW me to give you what I consider a new line of treatment for tonsillitis or quinsy. I have been much annoyed, as others have, with this disease, and despite all other remedies have had sup-uration in most cases. Here is the new idea : First, a saline cathartic, and follow with

- R.—Tinct. aconite..... gtt. xxx.
- Fl. extract phytolacca..... gtt. xxxxx.
- Syr. tolu..... q. s. ft. \mathfrak{z} ij.

M.—Sig. A tablespoonful every three hours.

A knowledge of the therapeutic action of poke-root and of aconite, tells at once the reason why it will abort a quinsy. I find it to cure nearly every case, if resorted to inside the first few days after symptoms appear.

WM. B. BIGLER, M.D.

SPRINGVALE, PA.

FOR DYSENTERY.

- R.—Mucilag. acaciæ..... \mathfrak{z} ss.
- Copaibæ..... \mathfrak{z} ij.
- Tr. opii deod..... \mathfrak{z} iiij.
- Sp. etheris nitros..... \mathfrak{z} ss.
- Aquæ..... q. s. ad \mathfrak{z} iiij.

M.—Sig. For an adult a teaspoonful after each movement of bowels.

Will cure almost every case inside twenty-four hours.

WM. B. BIGLER, M.D.

SPRINGVALE, PA.

Book Notices.

THE GENUINE WORKS OF HIPPOCRATES, translated from the Greek, with a preliminary discourse and annotations, by FRANCIS ADAMS, LL.D., Surgeon. Octavo, 766 pages, extra muslin, gilt top, price, \$5.00. New York : William Wood & Company.

It is safe to aver that not one in twenty of those who talk learnedly about Hippocrates ever read a line of his writings, except perhaps in the shape of a quotation picked up by chance. Those who feel an interest in the Father of Medicine are now offered an opportunity to investigate his books for themselves, through the medium of an excellent translation. The author gives us first a learned disquisition on the origin of Grecian medicine, the life of Hippocrates, the authenticity of the treatises attributed to Hippocrates, and the Physical Philosophy of the ancients. Of the sixty-one books attributed to Hippocrates, eighteen are presented as genuine by Dr. Adams, with copious annotations. There are a number of illustrations, depicting surgical instruments, etc., some of which are curiously similar to those in use at the present day.

The Medical Digest.

CHOLERA INFANTUM.—Dr. J. H. Medaris, of Harper, Kan., has for four years employed corrosive sublimate with satisfaction. He gives gr. $\frac{1}{100}$ every four hours, also giving the child water and pulv. acacia ad lib.

EPILEPSY IN THE FROG.—M. Laborde presented to the Société de Biologie two frogs suffering from true epilepsy, with the two periods of tonic and clonicity. One of the two had been subjected to puncture of the restiform body, and the other to partial ablation of the central lobes. Until the present time epileptic attacks have never been noticed in frogs, and M. Laborde is glad to demonstrate this condition of pathological identity between the inferior and superior animals.—*La Tribune Médicale*.

SULPHONAL IN THE NIGHT SWEATS OF PHTHISIS.—Erede calls attention to what he calls "the marked anti-diaphoretic action of sulphonal." He says that if given in the early hours of the evening, it almost invariably succeeds in suppressing or greatly diminishing the night sweats of phthisis. A dose of $\frac{1}{2}$ a gramme, given in the form of pastille or suspended in some gummy vehicle, generally suffices. The largest amount given was 1 gramme ; this failed of its effect only in a very few cases in which the disease was extremely advanced. As no untoward effects were ever noticed, even in very debilitated patients, Erede thinks that with proper precautions the drug might be pushed up to 2 grammes, the usual hypnotic dose. In many cases he observed that in discontinuing the sulphonal after a time the sweating did not begin again at once, but only after some days, when it was immediately checked by repeating the medicine. This shows that the organism does not readily adapt itself to the prolonged use of the drug, as it does, for instance, to certain narcotics. Erede is inclined to think that the effect of sulphonal in checking diaphoresis is to be explained by its action on the nervous system.—*Brit. Med. Jour*.

ARSENIC IN THE TREATMENT OF WARTS.—Dr. Paul Müller, of Hamburg, writing in the *Allgemeine Medicinische Central-Zeitung*, "cannot sufficiently recommend" the internal use of arsenic in the treatment of warts on the hands. He has employed it for more than two years and always found the warts disappear within three weeks. Another practitioner, Dr. Pullin, who seems to have used arsenic for the same purpose somewhat longer, says that he has known it cure warts in eight days. The dose ordered by Dr. Müller is only at the beginning, two drops of liquor arsenicalis three times a day for adults, and a quarter of a drop for children. These quantities are gradually increased.

THYMUS VULGARIS IN WHOOPING-COUGH.—Dr. A. Neovius reports, in the *Finska Läkaresällapets Handlingar* for March, 1891, very successful results obtained during an epidemic of pertussis by the exhibition of a syrup of garden thyme. He made a decoction of one part by weight, of sweet thyme in seven parts of water, to which was added five parts of syrup of althæa. Of this mixture, from a teaspoonful to a tablespoonful was given eight to ten times a day. The only unpleasant symptom caused by the drug was a slight diarrhoea in most cases. The relief afforded was prompt, the cough soon losing its spasmodic character, and assuming the form of a mild catarrhal bronchitis.

—*Medical Record.*

CREOLIN IN ECZEMA.—I have tried the remedy in cases of scaly eczema and psoriasis with marked relief to the irritability and itching, but it is still too soon to form any judgment as to its curative powers. But in the infective pustular eczema, it is an agent that effectually controls the process, and well deserves a trial on a larger scale. If we accept Unna's definition of eczema as "a chronic parasitic catarrh of the skin, with desquamation, itching, and the disposition to respond to irritation by exudation and well-marked inflammation," then we have a rational basis on which to ground our treatment by such an active germicide as creolin.

—Patteson, *Dublin Jour. Med. Sci.*

CODEINE.—I have used codeine since it was first introduced in neurological practice in 1867, and take this occasion to sound a note of warning in regard to it. It is a milder drug than morphine, but it can enchain if pushed far enough like other nerve enslaving drugs, and if it should come into as general use as the other opiates have, the story of the thralldom of our patients will be written some day as the chains of opium have been described by DeQuincy. There is an Iliad of woe in store for the profession if it should become as reckless with codeine as it has been with morphine. Let us not be too confident of the harmlessness of codeine.

—Hughes, *Medical Mirror.*

THE THERAPEUTICS OF EUPHORINE.—Euphorine, or phenylurethan, which was discovered by Sansoni, is a white crystalline powder with a slight aromatic smell, and readily soluble in wine, which forms a convenient medium for its administration. Sansoni prescribed it in cases where antipyretic, antiseptic, antirheumatic, or analgesic action was required, and stated that it was free from any objectionable action, such as occasionally follows antipyrin, antifebrin, phenacetin, salicylate of soda, and other drugs of a similar class. A number of recent obser-

vations have been made, especially on rheumatic cases, in Professor Stiller's wards in the Jewish Hospital in Pesth. In three cases of supra-orbital neuralgia, and in three cases of sciatica, a cure was rapidly effected, a case of chronic nervous headache was decidedly improved, two cases of rheumatic fever were cured, but in another which was complicated with endocarditis no improvement was obtained, though here salicylate of soda was more successful; in nine cases of chronic articular rheumatism good results of a more or less permanent character were obtained; in three cases of muscular rheumatism a rapid cure resulted; and, lastly, in six cases of habitual hemicrania seen in private practice, the remedy produced an almost magical effect. The doses employed were from three to six grains, and were repeated from three to five times a day.

CANTHARIDES IN CANCER.—More than twenty years ago it was reported that the Russian peasants were in the habit of using some kind of beetle as a remedy for cancer. Since that time some observations have been made which would appear to point to the possibility of cantharides being of some use for this purpose. In 1860 Dr. Wilms excised the left breast for a tumor of the size of a small walnut, which was shown by the microscope to be a reticular carcinoma. It returned, and was again excised a year after the first operation. A mixture of tincture of cantharides and camphorated wine in mucilage was now prescribed, and was continued for three months. The patient who was a widow at the time, afterwards married again, and gave birth to two children. She is still alive, and there has been no recurrence. Again, in 1880, a somewhat extensive cancer of the breast was operated on in the Augusta Hospital, after which the patient was treated with cantharides, and was known to have had no return of the tumor six years later; indeed, she is believed to be alive and well at the present time. Once more, in 1879, a stricture of the œsophagus, evidently of a carcinomatous nature, developed somewhat rapidly in a female patient; she was treated with cantharides, and a decided improvement took place, so that she was able to swallow pieces of food if they were well masticated. She is alive still, but feels, however, some inconvenience from the stricture, and at times is obliged to have recourse to the cantharides. The above interesting facts are published by Dr. Wolfert in the *Berlin Klin. Wochenschrift*.

CONSANGUINITY, CONCEPTION, AND MALFORMATIONS.—Has the condition of the male parent, when begetting, any distinct influence on the offspring? A case related by M. Guéniot at the Paris Académie de Médecine would seem to favor the theory that there is such an influence; but in this case consanguinity must be also taken into account. A woman married her nephew, a man three years younger than herself, and for long addicted to absinthism and other forms of intemperance. She declared that he was always partially drunk when she admitted his embraces. The curse of the mediæval Melusina fell on the offspring; seven children were born, of which only one survived, and several were deformed. The last child was of great size, causing labor to be difficult. It was anencephalous, with six fingers on each hand and six toes on each foot; the external genitals were absent. Two large serous cysts occupied the liver, and were the cause of the great bulk of the child. Considering how some of the most minute physical peculiarities and some of the most

subtle mental characteristics are transmitted from father to child, it is not wonderful that the offspring may be influenced by the state of its sire when impregnating its mother. The influence is probably indirect in a case like the above. No doubt absinthism and ordinary intemperance affect the nutrition of all cells and fluids, spermatic included. The nervous condition of the mother may be unfavorable under the circumstances. The share of consanguinity in this case is doubtful. Recent researches tend to show that unions of consanguinity may keep up or intensify diseases and malformations already in the family, but there is no evidence that they cause new maladies and deformities.—*Brit. Med. Jour.*

PSEUDO-SPERMATORRHOEA.—Dr. Soler y Buscallá (*Revista de Ciencias Medicas.*) In some way, by accident—as we say, although nothing can be accidental in the popular sense—or by design, a little book falls into the hands of some young fellow still in his salad days, in which he finds painted in vivid colors the terrible results of youthful folly or wickedness. And, with that human love for meddling with matters which do not concern us, from sheer or prurient curiosity, he dips furtively into its accursed pages. And woe to him if, not happily disgusted, he do not pitch the book into the fire, and examines for the first time his meatus to tremblingly see if there be or not a drop of some viscid fluid there! And, as we are ever apt to see that which we wish or dread to discover:

“He finds something there; no matter what,
’Tis . . . what he sought! . . .”

And if not his piece of mind, his purity, is gone for ever. Perhaps, thoroughly frightened, he calls upon the old family doctor, some wise and honest man, who, with a smile upon his lips but a reverent heart, can tell and does all the simple truth, and sends the lad home, let us hope, to thank God that he has not made a fool of himself.

But, suppose, in place of doing this, he write to the quack for “advice and medicine,” or calls upon some disreputable practitioner still within the fold, one of those scoundrels, as *The Hospital* last month put it, who open penny-a-week dispensaries or sell themselves to some Medical-Aid-Society to murder infants for two shillings per annum, what will the result be? Shame, pecuniary loss, unspeakable misery, aye, madness or suicide. What man amongst us with a few years’ experience cannot recall to memory one or more of those blasted lives or piteous endings? If in these skeptical days one could believe in demoniacal possession, surely a quack or a medical swindler is the foul fiend incarnate.—*Prov. Med. Jour.*

EARLY RECOGNITION OF TUBERCULOSIS IN CATTLE.—A most remarkable observation has recently been made by M. Léon Mandereau, of Besançon, which, if corroborated, must alter very considerably our ideas on the subject of the distribution of the tubercle bacillus in generalized and local tuberculosis. This observer removed from the eyes of cattle that had succumbed to tuberculosis a drop of the aqueous humor, stained it according to Ehrlich’s method, and found that the characteristic tubercle bacilli were present, sometimes in small, but always in sufficient, numbers to be readily identified. This opened up the way for the early diagnosis of tubercle, and M. Mandereau made careful examination of more than a score of animals suffering from tuberculosis in various stages. As he expected, he found the bacillus

in the aqueous humor in all cases where the condition was generalized; but, more remarkable still, he found them even in those cases where the disease was confined to the lungs and pleura, and even when it was present only in the liver. This being the case, the diagnosis of tuberculosis could be made comparatively easy during life. This observation is so startling that much hesitation must be felt in accepting it; though made in perfectly good faith, it may be nullified by some undetected fallacy; and until it has been shown, that all sources of fallacy were eliminated, it will be well to suspend final judgment. Should it prove to be true, it would be difficult to understand how Cohnheim and Salomonsen’s experiments on the production of intraocular tuberculosis are to be explained, if tubercle bacilli in the anterior chamber, when introduced naturally along the lymphatics, do not give rise to any marked symptoms of tuberculosis. Of course, here it may be argued that a wound of the tissues was produced, and that the conditions are therefore not the same. Another point for consideration is that, if these observations be correct, we shall have to revise all our notions as to the presence of tubercle bacilli in the blood and lymphatics of the system generally, even in cases of localized tuberculosis—conditions in which it has been held that tubercle bacilli were localized not only in their action, but also in their distribution. If the wound theory is to hold good at all, we should expect to find that after puncture of the cornea for the removal of the fluid, the tubercle nodules should make their appearance in the eye; and if these nodules do not occur, it is certainly presumptive evidence that tubercle bacilli are not there. Of course upon such a point as this depends the possibility of the application of the method, even if other observers are able to substantiate M. Mandereau’s observations. It is not now necessary to consider this question as regards the human subject, except in those cases of acute general tuberculosis which frequently are indistinguishable from enteric fever or certain forms of pneumonia; in such cases it might be valuable, but to the veterinary surgeons, who in their examination of cattle have to contend with numerous, and up to the present almost insuperable, difficulties, it would be of great value.

—*Brit. Med. Jour.*

A NEW VESICAL SPECULUM FOR USE IN SUPRAPUBIC CYSTOTOMY.—Considerable difficulty is often experienced, after the bladder is opened above the pubes, in keeping it dilated sufficiently to get a complete view of its interior. When there is only a calculus to be removed, as a rule but little difficulty presents itself; but if the calculus is encysted, if a portion of the prostate has to be removed, or if a vesical growth is the object of one’s search, the bladder oftentimes begins to contract so rapidly that the operator experiences the greatest possible difficulty in bringing his undertaking to a satisfactory termination.

Various plans have been employed to get over the difficulty. Prof. Trendelenburg, of Bonn, places his patients in such a position that the head and abdomen are much lower than the pelvis, by which means the intestines fall back against the diaphragm, and the atmospheric pressure in the bladder tends to keep its walls apart; but there are difficulties in the application of this plan to all such cases. Owing to the interference with the action of the diaphragm and the curvature of the body, which often results, respiration may be interfered with, the anesthetic is resented, and the operation considerably retarded, or

finished with undue speed. Even if this is not the case, the position is an awkward one for the operator, and the bladder rarely remains dilated as long as it is desirable that it should.

Other surgeons endeavor to get over the difficulty by the use of large retractors, or they employ a vesical speculum. The best known of these are Watson's and Keen's, both American patterns; but both are open to the same objection, namely, that they are only two-bladed, and do not keep back the posterior wall of the bladder. Keen himself admits the defects of these instruments in a paper in the *Medical News* of Philadelphia, April 18, 1891, "Five Cases of Suprapubic Cystotomy," where, referring to a tumor of the bladder which he explored, he says: "It was inspected with the electric light, though with some little difficulty. In doing so I used both Watson's vesical speculum and my own, but each had to be supplemented by a long pair of forceps to push back the posterior wall of the bladder," etc.

The very same difficulty has occurred to myself, and to remedy it I have devised a speculum which was made for me by Messrs. Arnold and Sons, West Smithfield, and which I have had in use and tested on numerous occasions during the last eighteen months. It completely gets over the difficulty which is present with all two-bladed specula.

It consists of three blades widely fenestrated, which converge toward a point. The two lateral blades diverge as the handles are approximated, whilst the third blade is drawn back by the straight bar which lies between the handles. A small screw fixes a ratchet, so that the handles—and, consequently, the blades as well—can be fixed in any position that may be necessary.

When it is brought into use the instrument is introduced into the bladder wound closed, and is subsequently opened to any extent that may be required. The handles are placed uppermost over the belly, and form, with the blade, an obtuse angle; by this means they can be more easily employed than would otherwise be the case with a fat abdomen.

—Clarke, in *Brit. Med. Jour.*

Medical News and Miscellany.

DR. ROBINSON denies the report of Mr. Bardsley's being a parietic.

EIGHT per cent. of the people of Europe were attacked by influenza.

CANNED salmon found several victims in London during the first week of July.

EGYPT is overrun with foreign physicians, who have no visible means of support.

FIVE deaths from chloroform have occurred in the Royal Infirmary at Manchester since January 1.

DR. SILVA JARDIN, of Rio de Janeiro, met with a terrible death—by falling into the crater of Vesuvius.

IN Australia green boughs of the eucalyptus are utilized in the sick-room as disinfectants, and to relieve the cough of phthisis.

AN English surgeon and anesthetizer at a hospital, committed suicide because a patient to whom he was administering chloroform died suddenly.

DR. G. FRANK LYDSTON has been elected to the chair of Genito-urinary and Venereal Diseases in the Chicago College of Physicians and Surgeons.

THE London courts have denied Mrs. Maybrick's application for the insurance on the life of her husband, for whose murder she is now serving a sentence.

CANON HARFORD, of Westminster, is so profoundly impressed with the value of music as a therapeutic agent that he advocates the formation of a band of "orchestral physicians."

DR. W. S. CHRISTOPHER has resigned the chair of Theory and Practice of Medicine in the University of Michigan to take the chair of Diseases of Children in the Chicago Polyclinic.

SEYMOUR, Indiana, has a boy who has just awaked from a continuous sleep of one hundred and nine hours. That youth's talent is wasted in the wild and woolly West. He should come to Philadelphia.

Two Spanish physicians refused to hold a post-mortem because no instruments or disinfectants were supplied by the authorities. The physicians were fined, but an appeal to the higher court resulted in their acquittal.

THE revenue from patent medicines in Great Britain was \$210,000 thirty years ago. Within a generation the government revenue from this source has increased five hundredfold, now footing up \$100,500,000 annually.

It is not alone in Philadelphia that the sweet girl graduate in medicine is taking high rank. The London School of Medicine for Women sent up nine students for the London University M. B. degree, and all succeeded.

THERE is still room for brute strength in the struggle for existence in the effete monarchies. At a Parliamentary election in Ireland Dr. Hackett was struck by a stone that drove fragments of his spectacles into his eye, endangering its sight.

AN epidemic of typhoid fever in Valley Falls, R. I., has been traced to poor drainage and privy vaults about a certain well. Over fifty cases have resulted from this source, and yet there are persons who place a light estimate on plumbing work.

DURING the years 1887-8 over 2,000,000 persons were vaccinated in Germany, with six deaths—five from erysipelas and one from blood-poisoning. Since compulsory vaccination was enforced, in 1875, Germany has had less small-pox than any other country in Europe.

SOME joker is said to have started the story that a mineral spring near Tralee, Ireland, was possessed of miraculous curative properties, and the people are flocking in crowds to the spring. Some declare themselves cured, but, as with faith cures in general, those most in need of miraculous aid go away disappointed.

IN Corea physicians are only allowed to examine the patient in the following manner: A thread is tied around the patient's wrist, and passed out by a hole in the wall to the doctor outside, who, by inspecting the thread, is supposed to arrive at a diagnosis. Corean doctors are evidently gifted with what may be termed the "*tactus eruditus*."

DR. H. M. WHELPLEY, Professor of Microscopy in the St. Louis College of Pharmacy, and for the past five years a lecturer in the Missouri Medical College, has been elected Professor of Physiology and Histology, and Director of the Histological Laboratory of the latter institution. The doctor has also accepted the position as Secretary of the Faculty.

FOR insect stings, Terry (*Med. Progress*) recommends the application of urine, as a remedy always readily obtainable, and that gives speedy relief. The active agent is probably urea. This explains the ancient custom of treating snake-bites by cutting the snake open and applying the inner surface to the bite, as the contents of the snake's intestine consist almost entirely of urea.

NEW YORK has a patient whose patronage appears to be fatal to the life of her medical adviser. Dr. Johnson died two days after this woman came to him for treatment. Six months later, she reappeared at Dr. Pond's clinic, and two days later Dr. Pond died. The next time she appeared, Dr. Phillips took charge of her, and was found dead in his bed the next morning. Dr. Phillips was a young man, and supposed to be in perfect health.

GLASGOW has now 3 ambulance wagons, the annual cost of horsing which is over £450. During the year they answered 1,518 calls, an increase of 80 on the previous year. In the city and suburbs 29 classes had been held, with 816 enrolled pupils, of whom 615 passed the examination. In connection with the Association there are now 29 centers. Detached classes have been held in 40 towns, and since the formation of the Association 34,846 pupils have received instruction in "first aid."

CHOLERA IN THE EAST.—Cholera is reported to have again broken out at Aleppo and in the surrounding villages. The disease was not officially announced to have ceased in Northern Syria until somewhat late last year, and it is highly probable that the recurrence of the disease is due either to mild cases that have taken place in the interval, or to resuscitation of the poison with the advent of hot weather. The position which Aleppo occupies on the highway to the coast and to Asia Minor generally gives importance to the occurrence. Notwithstanding the large number of pilgrims already congregating in the Hedjaz, the sanitary state of Medina is declared to be satisfactory; but in Mecca a paludal fever is raising the general rate of mortality.

COUNT MATTEI'S CANCER CURE.—Among the many claimants to the title of cancer cure is Count Mattei, an Italian nobleman, one of whose remedies bears the captivating name of "green electricity." The bottles so labeled contain a liquid which careful analysis has shown to be nothing more than water. Nevertheless there are not wanting even medical men who maintain that although they were altogether skeptical as to its being able to produce any effect, were obliged to confess that the patients on whom it was tried, showed unmistakable signs of improvement. An English journalist, Mr. Stead, is about to have Count Mattei's remedies tested, so as to either establish or demolish their claims to a cure. Sir Morrell McKenzie, Mr. Lawson Tait, and Dr. E. W. Votter have consented to act as a committee, Mr. Stead having placed four beds at their disposal for this purpose.

—*Canada Med. Record.*

Our lips we can't help curlin'
At the medical profesh :
Sure, there's Dr. Quack, of Berlin,
Always finding something fresh
To prevent mankind from croaking,
And to load himself with fame.
This is not a theme for joking,
But—we get there just the same.

Here's a man has struck a plan, sirs—
So the daily papers say—
To prevent the growth of cancers,
And we only hope he may ;
All the things they'll soon be healing
To which one can put a name—
Yet we're haunted by a feeling
That we'll get them just the same.

Oh, confound all foreign "masters"
With a secret to disclose !
We believe in mustard plasters,
And put tallow on our nose.
Let the savants of Vienna
Spin their narratives so lame—
If we stick to salts and senna
We can get there just the same.

—*Hosp. Gaz.*

THE American Electro-Therapeutic Association will hold its First Annual Meeting at the Hall of the College of Physicians, corner Locust and Thirteenth streets, Philadelphia, Pa., Thursday, Friday, and Saturday, September 24, 25, and 26, 1891, under the presidency of Dr. G. Betton Massey.

Physicians interested in the discussion of electricity in medicine are invited to attend, without further notice. Horatio R. Bigelow, M.D., *Chairman Executive Council*; Wm. H. Walling, M.D., 2005 Arch street, Philadelphia, *Secretary*.

THE CANCER GRAFTING EXPERIMENTS.—An official report on the cancer grafting operations of Drs. Bergmann and Han has been issued. The report denies that the treatment was experimental. After patients were operated on for cancer, pieces of sound skin were grafted on the parts operated on, and pieces from the tainted places were sewn in the wounds caused by the removal of the sound skin. The operation was performed with the consent of the patient, and was done at a period when the profession was still ignorant whether cancer was contagious or not. The treatment resorted to proved the contagiousness of cancer, as was recorded in a paper read at the Medical Congress in 1889. The report adds that Dr. Leidig is incompetent to pronounce on the subject, and that he erred in asserting that the treatment was an experiment.

REORGANIZATION OF THE CHICAGO COLLEGE OF PHYSICIANS AND SURGEONS.—The coming collegiate year will be marked by a number of radical changes in the above institution; several gentlemen have resigned and a number of new professors have been elected. Among the new men are Dr. Bayard Holmes, Surgical Pathology; Dr. Boerne Bettman, Ophthalmology; Dr. James A. Lydston, Professor of Chemistry and Lecturer on Ophthalmology and Otology; Dr. Weller Van Hook, General Pathology; Dr. E. E. Babcock, Clinical Medicine and Diseases of the Chest; Dr. G. Frank Lydston, Surgical Diseases of the Genito urinary Organs and Venereal Diseases.

The college already has an excellent reputation, and the elements of strength which have been added to the faculty will undoubtedly add to the usefulness and renown of the institution. The increased confidence of the alumni of the institution augurs well for its future prosperity.—*Western Med. Rep.*

THERE have been in France for forty years savings banks for old age, established under a law passed in 1850. These banks have no such objectionable feature as the one I have mentioned, and others which might be noticed; and their sole defect is that their existence is not as well known as it should be. By these banks, established as the result of a prolonged study of the matter by competent men, a workman or employé who deposits every day the price of a drink—that is, ten centimes—beginning at the age of twenty, will receive when he reaches fifty-five \$60 a year for the remainder of his life; when he reaches sixty, \$100 a year; when he arrives at sixty-five, \$172 a year; as long as he lives.

CLINICAL TEACHING IN MADRID.—The Spanish Government is about to submit to the Cortes a proposal for the creation of a Clinical Hospital in connection with the Faculty of Medicine of the Central University (Madrid). Additional facilities for clinical instruction are said to be urgently needed in the Spanish capital, and it is gratifying to know that the Government is showing symptoms of being alive to the fact, but those interested in the reform of medical education in Spain are not sanguine that the measure will be carried into effect, at any rate for a long time to come, past experience having shown that the powers that be in Spain act up to the spirit of Lord Melbourne's favorite motto—never to do to day what could by any possibility be put off till to-morrow.

PROTECTION OF WATER.—During the recent session of the Maine Legislature it passed a bill entitled, "An Act to Protect Water used for Domestic Purposes," of which the following are provisions:

SECTION 1. Whoever knowingly and wilfully poisons, defiles, or in any way corrupts the waters of any well, spring, brook, lake, pond, river, or reservoir, used for domestic purposes for man or beast, or knowingly corrupts the sources of the water supply of any water company, or of any city or town, supplying its inhabitants with water, or the tributaries of said sources of supply in such manner as to affect the purity of the water so supplied, or knowingly defiles such water in any manner, whether the same be frozen or not, or puts the carcass of any dead animal or other offensive material into said waters, or upon the ice thereof, shall be punished by a fine not exceeding one thousand dollars, or by imprisonment not exceeding one year.

SECT. 2. Whoever shall wilfully injure any of the property of any water company or of any city or town used by it in supplying water to its inhabitants, shall be punished by a fine not exceeding one thousand dollars, or by imprisonment not exceeding one year; and such person shall also forfeit and pay to such water company, city, or town three times the amount of actual damages sustained, to be recovered in an action of the case.

SECT. 3. The provisions of all general laws, and of all special acts inconsistent with this act, are hereby repealed.

ANOTHER NEW CURE FOR CONSUMPTION.—At a meeting of the Paris Academy of Medicine, held on Tuesday last, Dr. Lannelongue read a communication in regard to his experiments in the treatment of tuberculosis. He states that his lymph consists of a mineral substance fatal to microbes—chloride of zinc—and he applies it in doses, of various degrees of strength, according as the tuberculosis is external or pulmonary. Dr. Lannelongue calls his method the sclerogenous method—that is to say, a method

destined to render the flesh and fibers attacked capable of being cicatrized. His process, he asserts, circumscribes the action of the tuberculosis bacillus by attacking it at its extreme base, in withdrawing it from the extremity to the center of its action, and in causing its disappearance by reducing it to its base of action. He proceeds in the same fashion with the bacillus acting on the lung, and when the fibers, the tissue and flesh by the action of the bacillus have been transformed into pus, he proceeds as a surgeon and reconstitutes by his inoculations the removed portions. His process has thus results just the opposite of the lymph of Dr. Koch. Dr. Lannelongue begins with a local treatment, but in proportion as this treatment produces local effects, all the rest of the organism also experiences a progress which is manifested simultaneously with the local cure, and in fortunate cases there is a general cure. Dr. Lannelongue proceeds according to the Pasteur method, and operates on the Koch bacillus. He has applied and combined the results of these two workers, and the results so far are very promising. It will be observed that there is no mystery about Dr. Lannelongue's curative agent, as there was with Koch's lymph. We are, therefore, able to speak of his method in terms of respect.—*Hospital Gazette*.

WEEKLY Report of Interments in Philadelphia, from July 11 to July 18, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess.....	2	4		Homicide.....	1		
Anæmia.....	2			Inanition.....			11
Aneurism of the aorta.....	3			Inflammation bladder.....	2		
Apoplexy.....	11	1		" brain.....	1		15
Bright's disease.....	10			" bronchi.....	1		3
Cancer.....	6			" kidneys.....	2		3
Casualties.....	6	2		" larynx.....	1		1
Congestion of the brain.....	2	13		" lungs.....	6		9
" lungs.....	2			" pericardium.....	1		
Cholera infantum.....	129			" peritoneum.....	3		
Cholera morbus.....	3			" s. & bowels.....	5		4
Cirrhosis of the liver.....	36			" tonsils.....	3		1
Consumption of the lungs.....	4	3		Insanity.....	2		
" bowels.....	1			Jaundice.....	1		
Convulsions.....	22			Malformation.....	1		1
" puerperal.....	1			Mania a-potu.....	1		
Croup.....	3			Marasmus.....	1		29
Cyanosis.....	4			Measles.....	2		3
Debility.....	3	1		Obstruction of the bowels.....	2		
Diabetes.....	1			Old age.....	6		
Diarrhœa.....	3	6		Paralysis.....	9		
Diphtheria.....	4			Rheumatism.....	1		
Disease of the liver.....	1			Shock.....	1		
" heart.....	18	4		Septicæmia.....	1		1
" spine.....	1			Softening of the brain.....	1		
" kidneys.....	1			Stricture of œsophagus.....	1		
Drowned.....	4	3		Suffocation.....	1		1
Dropsy.....	1			Suicide.....	1		
Dysentery.....	1	2		Sunstroke.....	1		
Epilepsy.....	1			Syphilis.....	1		1
Enlargement of the heart.....	1			Teething.....	5		
Eczema.....	1			Tetanus.....	3		
Fever, malarial.....	2			Tumor.....	1		
" remittent.....	1			Ulceration of the bowels.....	1		
" scarlet.....	2			Uræmia.....	5		1
" typhoid.....	3	4		Whooping cough.....	2		
Fistula.....	1			Wound, gunshot.....	1		1
Gangrene.....	2						
Gaul stone.....	1			Total.....		193	306

A TALK WITH MR. BLAINE—BY OUR SPECIAL CORRESPONDENT—"AFTER" THE "TRIBUNE."—"It is a hot day!" said Mr. Blaine to me, as we sat side by side on the sand.

He was pale and robust, and spoke in a very feeble voice, but none the less loudly. Upon the assent to the idea advanced, he resumed:

"I am troubled excessively with a tangled optic nerve, also a nervous contraction of the palate and tonsil, especially at meal-time, while I fear my kidney is dragging anchor. This would not trouble me much were it not accentuated by touch of panaratic diabetes, complicated with retrospective whooping-

cough. However, by the aid of the new antiseptic germicide, microcidine—c-i—not s-i—got that? A fellow who was up here the other day distressed me deeply by spelling these things wrong, and I was astonished to find on reading his account of them that I had laid in another choice and altogether new selection of ailments."

We were silent a moment, while I made notes.

"Microcidine," I repeated, and he then proceeded.

"The symptoms—polyuria glycosuria, seemed to call for its use. But," he added briskly, "with all these things you may truthfully say that I am really better than I have been for many years."

"Do you sleep well?" I asked.

"Very—when not dreaming of fish. You might also say, by the way, that one reason I left Washington was this: It is hot there in summer."

I made note of this fact.

"In finishing your article, you might say that when I am not surrounded by an anxious staff of doctors, I am gayly toying with a tennis racket. On my pale and emaciated days, I am in touch with misery, but when buoyant in health, I naturally look out for a little fun while I am waiting—but don't put that last sentence down—on second thought."

Just here Mr. Blaine remarked that our conversation had overtaxed his nervous force, and as he must save all his energies for a seven-course dinner that night, he begged me to excuse him. The whole family said they had enjoyed my call very much—very much, indeed.—J. S., in *New York Truth*.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending July 18, 1891.

BOYD, ROBERT, Assistant-Surgeon. Ordered to the U. S. R. S. "Dale," Washington, D. C.

ATLEE, L. W., Passed Assistant-Surgeon. Ordered to the "Independence."

MARTIN, WM., Surgeon. Detached from duty at the Marine Rendezvous, San Francisco, Cal., and from special duty in that city, and granted leave of absence until September 15, and then to be placed on waiting orders.

CRAWFORD, M. H., Passed Assistant-Surgeon. Detached from the "Independence," and ordered to duty at the Marine Rendezvous, San Francisco, Cal., and to special duty at that city,

APPOINTMENT.

HOPE, JAMES SHIRLEY, appointed an Assistant-Surgeon in the Navy, from July 10, 1891.

TO CONTRIBUTORS AND CORRESPONDENTS.

ALL articles to be published under the head of original matter must be contributed to this journal alone, to insure their acceptance; each article must be accompanied by a note stating the conditions under which the author desires its insertion, and whether he wishes any reprints of the same.

Letters and communications, whether intended for publication or not, must contain the writer's name and address, not necessarily for publication, however. Letters asking for information will be answered privately or through the columns of the journal, according to their nature and the wish of the writers.

The secretaries of the various medical societies will confer a favor by sending us the dates of meetings, orders of exercises, and other matters of special interest connected therewith. Notifications, news, clippings, and marked newspaper items, relating to medical matters, personal, scientific, or public, will be thankfully received and published as space allows.

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The Times and Register.

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Original Articles.

TREATMENT OF LOCAL TUBERCULOSIS BY THE INJECTIONS OF CHLORIDE OF ZINC.¹

By M. LANNELONGUE.

Translated by A. E. ROUSSEL, M.D.

M. LANNELONGUE has endeavored to obtain cultures from the tuberculous matters which might be used for vaccination, but the results obtained were unsatisfactory.

He has previously treated a case of congenital hypertrophy of the forearm of lymphatic origin by means of injections of solutions of chloride of zinc at 20 per cent., at 10 per cent., and even at 7 per cent. These injections produced a marked sclerosis, and finally produced an almost complete cure with marked diminution of the volume of the arm.

The method of treatment of local tuberculosis which he presents to day, and which he has studied with M. Achard, consists in injecting around the tubercular tissues the medicinal liquid solution of chloride of zinc. This proceeding is based on the fact of the peripheral grouping of tubercular lesions. The chloride of zinc fixes the anatomical elements, obliterates by coagulation the small vessels, produces an endarteritis which is propagated a sufficient distance. The following days there is a considerable gathering of the leucocytes around the injected points. Rapidly there is produced a sclerosis, together with an endoperiarteritis, which is continued for a long distance, and contributes to carry further the curative sclerosis. The solutions employed are at 10 per cent. The pain is sometimes quite severe, at least in the peripheral

injections. The few pulmonary injections made by the author have not been painful.

The tissues at the point of injection increase in volume, become red. (There is sometimes vascular ruptures), and there is often formed a subcutaneous venous plexus. On the following days the irregularities of the fungus excrescences diminish, the surface becomes regular, but there is noticed a hard and thickened mass. Finally, this thickening becomes less, and in the end nearly disappears. Injected in the periosteum the solution produces a true curative osteoma.

The general condition is not much affected; the temperature is but slightly elevated; the height of the child gradually increases. There is sometimes observed (four times out of twenty-four cases), a sanguinary effusion simulating an abscess, which disappears rapidly by compression; at other times we notice small cutaneous eschars of no importance.

In suppurating tuberculosis without external opening (cold abscess peri-articular, intra-articular suppuration) there is not true suppuration; the bacillus of Koch is in itself the only cause. M. Lannelongue, in three of these cases, drained the cavities, washed them thoroughly with sterilized water, and has then treated by means of injections of chloride of zinc, the walls thus disembarassed of the pathological debris. He has obtained two complete and one partial cures.

In open suppurating tuberculosis the injections provoke an inflammatory irritation, sometimes suppuration, often disclosing the fibro caseous or osseous sequestræ, and indicating to the surgeon the route to follow.

This proceeding may thus indicate to the surgeon the method to be chosen. He will thus know what he should remove, and how he should go about it. Surgery will become a complementary method to that of the chloride of zinc injections. This method

¹ Abstract of a report presented to the Académie de Médecine.

essentially *scîérogène* will have the great advantage of producing, by means of the sclerosis excited, an almost impassible barrier for the bacillus, which, from this time, will no longer be able to propagate itself at a distance, and give rise to either secondary accidents, or to a general infection.

Experimentally on healthy tissues the chloride of zinc fixes the elements; produces an endarteritis; causes a concentration of very numerous lymphatic elements; produces a rapid sclerosis.

In the lung the injection produces a considerable leucocytic grouping. At the center of the nodule produced at the inoculated point the alveoli are empty, sclerosed, the vessels are obliterated; there is a true nodule of sclerosed pneumonia. In dogs these injections practised several times in the lung, three to ten drops at a time, have produced no accident whatever. The animals have continued to remain in good health.

In the bones of rabbits there was produced small osteomas, which infringed on the central canal as far as the level of the inoculated point. When the chloride of zinc is injected into the peritoneum there is occasionally produced small eschars on the surface of the intestine.

M. Lannelongue has produced tuberculosis in animals by means of inoculations of very virulent tubercular cultures; he is at the present time studying the action of the injections of chloride of zinc on the experimental lesions. In man this action upon the tubercular elements is variable. A little girl having been treated for a costal tuberculosis by means of these injections, presented a small swelling simulating an abscess.

This, having been removed, was examined histologically, and inoculated in a guinea-pig. These two proceedings did not disclose the existence of a single tubercular bacillus. In another case, the injections having been introduced into a ganglionic mass in the axilla, there was found, after extirpation, in the center of the ganglion, a caseous mass, around which existed a zone of giant cells, then, nearer the outside, the ganglionic wall, and finally, surrounding this, a true sclerotic wall, which absolutely prevented propagation in the neighborhood. This is, accordingly, characteristic of this proceeding essentially *scîérogène*.

The *modus faciendi* is the following: We must inject 2 or 3 drops at the time of each injection, and make four or five injections around the mass. We thus inject from 10 to 15 drops of the solution at the periphery of the tubercular lesion.

The injection should be a deep one. If we have to deal with an articulation, we must not fear to penetrate as far as the bone, or to arrive at a level with the articular *cul de sac*; but we should avoid throwing injections into the interior of the articulation, or there will be produced an abundant effusion. The injections should be made along the course of the large ligaments, and near the vicinity where the synovial is inserted in the bones, points where the articulations derive their vessels from the bone. We should avoid making a too superficial injection. When fungous excrescences exist, we must inject the solution toward the surface of the same. The solution at one-tenth is sufficient for the articulations, and the non-suppurating ganglions. But if suppurating, we must treat them as unopened tubercular abscesses. That is to say, we wash them thoroughly with sterilized water, and then inject around the parts. For the epididymitis we must employ solutions of one-twentieth. In several cases where M.

Lannelongue has practised intra-pulmonary injections, he has used a solution of one-fortieth. No matter where the point injected, we must always operate antiseptically. Carefully wash the surface and sterilize the syringe and needle. In all the cases we must never inject more than 2 or 3 drops at one time at any one point. After the injection it is well, when we are dealing with a peripheral lesion, to make compression.

Finally, M. Lannelongue has also employed, with marked advantage, his method in two cases of cancerous tumors. One was an epithelioma of the face, the other a sarcoma of the breast.

M. Lannelongue presents twenty-two observations of cases treated by this method, after which he exhibits to the Académie six children in which the varied tubercular lesions, before treatment, have become solely fibrous. We may consider all these children as cured, or, at least, as approaching that end.—*La Médecine Moderne*.

Society Notes.

GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

May Meeting.

The President, DR. HENRY M. WILSON, in the Chair.

DR. BRINTON read a paper entitled

A DAY'S WORK IN OBSTETRICS.

Under this title he related the following cases:

1. A case of podalic version.
2. A case of normal labor.
3. A case of shoulder presentation.

Efforts at version unsuccessful; vagina ruptured; the woman dying undelivered.

4. A case of placenta prævia lateralis treated by internal podalic version; mother and child saved.

DR. MILTENBERGER: There is some discussion in regard to the preference for high forceps and version. I prefer version; but the profession is divided, and the choice comes to a matter of skill and individual practice.

DR. NEALE: One of the points claimed for version over high forceps is, that in version the narrower diameters of the head come first. It has been claimed that the same condition is brought about in the use of forceps by the diminution of the diameters of the crown, so that they are less than those of the base of the skull. I cannot see how this is, for certainly the forceps do not, as a rule, compress sufficiently to reduce the diameters of the crown to less than those of the base of the head.

Repeated attempts at version have often given bad results when the uterus is contracted and retracted. When there is a neglected cross birth, and the child is dead, after a moderate attempt at version has failed, decapitation should be done. By means of Braun's hook it is certainly a comparatively easy and safe procedure.

I have no criticisms to make upon the treatment Dr. Brinton adopted in his cases.

DR. BRINTON: Since this case of rupture of the vagina has been reported, it has been stated by a pathologist of this city that it is the only one on record. I would like to ask if any of the gentlemen present know of any such cases.

DR. MILTENBERGER: There are, certainly, on record, many cases of rupture of the vagina. I have seen at least two such cases.

DR. THOS. A. ASHBY: I once passed a sound through the uterus. The sound went in easily, and could be felt just below the umbilicus. Before this the patient had had pus running slowly from the uterus, which had, evidently, had its origin higher up. There were no bad symptoms. The woman rode home—a distance of eight miles—and was not heard from.

I once attempted to remove an epithelial growth from the vagina, and all at once the intestines came down. I cleaned away the diseased tissue, closed up the opening with a firm stitch, and the wound healed promptly.

DR. GEO. W. MILTENBERGER read a paper upon

SUPERFETATION AND SUPERFECUNDATION.

DR. P. C. WILLIAMS: I had a case recently of ovulation during lactation. A lady came to me who had continued to nurse her child, and is now five months pregnant. These cases show that there may be ovulation without menstruation, and lead me to agree with Dr. Miltenberger.

DR. ASHBY: I have had cases similar to Dr. Williams. I have been surprised at the frequency with which menstruation returned after apparent removal of both ovaries and tubes. One of the first cases upon which I operated, was one of hysterio-epilepsy. I thought I had removed all the ovarian tissue, but found subsequently that I had not. She began to menstruate about eight months after the operation, and afterwards suffered from metrorrhagia. Three years later I examined her under chloroform and found a small tumor. I operated and removed a small portion of an emptied ovary. She recovered promptly, and has not menstruated. Her health is good, and there has been no return of the hysterio-epilepsy. I have had other cases in which some parts of the ovaries had been left behind. These women continued to menstruate.

In those cases where I have succeeded in removing the ovaries entirely, I have not observed the return of menstruation.

DR. B. B. BROWNE: I attended a woman a few years ago who had had seven children and had never menstruated. She was married before menstruation began, and had had children very frequently. I think superfetation does occur. It certainly occurs in uterus septus.

The removal of the ovaries has little to do with the cessation of menstruation, but the tubes have much to do with it, and it is when a portion of the tube remains behind that menstruation continues. Menorrhagia will occur when the tube is closed at the outer extremity. When a part of the ovary is left, of course a part of the tube is left also.

DR. W. E. MOSELY: My experience has been such as to make me believe that menstruation does not depend upon the presence of the fallopian tubes, nor is it independent of the ovaries. Eighteen months ago I opened a lady's abdomen for a very severe case of chronic pelvic peritonitis with double pyosalpinx. Both tubes were tied close to the uterus and removed, but after a diligent search no trace of either ovary could be found. Dr. W. H. Welch, to whom the specimens were shown, expressed the opinion that the ovaries had probably been destroyed in the inflammatory process. The patient made a good recovery after very prolonged drainage, made necessary by the sloughy condition of the pelvic contents and

the fecal fistula, which persisted for several weeks. This patient, for months, has been menstruating regularly and freely every three weeks. In all probability some portion of ovarian tissue escaped destruction.

In another case in which I took special pains to remove every particle of each ovary and both tubes, on account of severe hemorrhage, the patient has not had a show during the past twelve months.

DR. ASHBY: Mr. Tait has maintained the position of Dr. Browne for several years.

In one case the patient had been suffering from hemorrhage of tubal origin; I removed both tubes and one ovary. The other ovary having undergone cystic degeneration it was impossible to remove all the ovarian tissue. This patient has been cured of her metrorrhagia, but has a venereal menstruation.

DR. OPIE: It seems quite well established by post-mortem results, that all cases of menstruation following oöphorectomy are not due to failure on the part of the surgeon to completely remove the ovaries.

The utero-ovarian ligament, however, is sometimes very short, and the button-like section beyond the ligature, which, in such cases contains ovarian stroma, may keep up a dominating influence; again, the anatomical shape of the ovary gradually sloping off into the ligament, causes a part of the ovarian tissue to be left on the uterine side of the ligature in spite of the utmost care on the part of the operator.

The rule after child-birth seems to be that menstruation is in abeyance for a variable number of months, but cases have doubtless occurred in the experience of most obstetricians, where it has been uninterrupted during lactation. I have met with a number of cases when women have conceived during lactation, when there was no accompanying monthly flow. Dr. Tait thinks that during, and even after the menopause, ovulation goes on, though the mucous membrane is disqualified for securing a fecundated ovule. Ovulation may be going on during lactation, but the mucous lining of the uterus may not be well qualified for menstruation or fecundation.

DR. BRUSH, of New York, who has a dairy-farm, has been performing some interesting experiments to find out the mode of securing the best quality of milk. He has determined that the heifer, after the removal of the ovaries, can be made a perpetual milker, and that the milk is of better quality than in cows subject to ovulation and impregnation.

DR. BRINTON: With reference to menstruation after the removal of the ovaries, we have the statement that 1 or 2 per cent. of women have supernumerary ovaries, and possibly the return of the menstruation is due to the presence of the third ovary.

DR. MILTENBERGER: Dr. Browne laid much stress upon the fact that menstruation continued when obstructed tubes were present. Menstruation has nothing to do with the passage of the ovule along the tubes, but is due to the maturation of the ovule. Therefore, the tube may be obstructed as much as you please and there will be no results. Baldy and Englemann have reported a number of cases of pregnancy after the ovaries were apparently removed by skilful operators. In other cases the ovaries, supposed to be removed, have been found post-mortem.

DR. BROWNE: In most cases where the ovary and tubes are removed the lumen of the tube is obstructed by the ligation.

DR. ASHBY exhibited a specimen of a ruptured tubal pregnancy which he had removed from a patient seen in consultation with Dr. Arthur Williams, of Elk Ridge, Md. The patient was thirty-four years of age,

and gave birth to one child ten years ago. She conceived in February of this year, and about the eighth week of gestation was seized with violent symptoms of intra-pelvic hematocoele. Dr. Williams was called in, and after examination diagnosed the condition as a ruptured tubal pregnancy. I saw the patient with him the following day, and, upon examination, confirmed the diagnosis. The patient rallied from the shock of the first rupture, and one week later a second rupture took place, though not following with such violent and dangerous symptoms as in the first instance. The surroundings of the patient were so unfavorably, that she was removed from her home in Anne Arundel county to the Maryland General Hospital, where the laparotomy was performed. Upon opening the abdomen her pelvis was filled with bloody serum, blood clots, and evidences of general peritonitis. The omentum was in such a condition that it was found necessary to remove about three-fourths of the tissue.

The patient was critically ill from the third to fifth day from symptoms of intestinal obstruction. Her bowels were moved by administering 1-grain doses of calomel every hour for twelve hours, every other method having failed. The patient has made a successful recovery.

This is the third case of tubal pregnancy I have removed by laparotomy within the past two years, all of them having recovered.

MEETING OF THE MICHIGAN STATE BOARD OF HEALTH.

THE regular Quarterly Meeting of the Michigan State Board of Health was held at the State Capitol, Lansing, July 14, 1891, with all the members present: John Avery, M.D., President, Greenville; Arthur Hazlewood, M.D., Grand Rapids; Victor C. Vaughan, M.D., Ann Arbor; Prof. Delos Fall, Albion; Mason W. Gray, Pontiac; Hon. Frank Wells, Lansing, and Henry B. Baker, Lansing.

The Secretary reported that during the last quarter 380 packages of pamphlets, issued by this State Board, on The Restriction and Prevention of the Dangerous Communicable Diseases, had been sent to 380 local health officers in Michigan, to be distributed to the neighbors of the persons sick, during outbreaks of the five dangerous communicable diseases, as follows: In 96 outbreaks of diphtheria; in 129 outbreaks of scarlet fever; in 37 outbreaks of typhoid and typho-malarial fever, and in 118 outbreaks of measles. In each outbreak the pamphlets sent gave instructions how to restrict the particular disease which was in the locality. No small-pox was reported in Michigan during the quarter.

Relative to dangerous communicable diseases, there were 1,075 communications received and placed on file, and 1,235 letters, written cards, demands for weekly or final reports (on cards or in form of circular letters) relative to such diseases, were sent out during the quarter. About 1,000 pages of letter-copying book were used for copying important letters written.

About 1,000 copies of the Annual Report of this Board for 1889 were distributed to the mayors, health officers, and clerks of cities, health officers and clerks of villages, members and ex members of this Board, secretaries of other State Boards of Health, and sanitary journals and other exchanges.

About 2,300 copies of the "Public-health Laws in force in 1890" were sent out during the quarter, mostly to local health officers in Michigan.

The names and addresses of 1,225 local health officers for 1891-2 have been reported and entered on the books of this Office. About 2,300 sets of small pamphlets, telling how to restrict and prevent the several dangerous communicable diseases, were sent to the health officers, and other officers, of local Boards of Health at the time of the receipt of the names of the health officers just appointed.

The proceedings of the two Sanitary Conventions, at Alpena and Charlevoix, have been printed, in separate pamphlets, and can be had by those interested.

About 2,000 copies of a leaflet—"Now is a Good Time to be Vaccinated"—giving reasons why, and exhibiting a diagram showing the month of greatest danger from small-pox in Michigan, were distributed during the quarter.

Work in connection with the statistics of sickness and of coincident meteorological conditions has been kept up during the quarter.

The most important action was directing the Secretary to publish a brief pamphlet telling how to restrict and prevent consumption, the pamphlet having been adopted by the Board after very careful consideration. This pamphlet states that "Consumption is the most common and fatal disease;" "that the number of deaths which actually occur in Michigan from consumption is probably over 2,500 per year;" that "consumption is now known to be a communicable disease," and that "a large part of this mortality can, and ought, to be prevented." The pamphlet describes the bacillus which causes consumption, and which is in the sputa of consumptives, cites instances where consumption has been communicated by the sputum dust containing these germs, and emphasizes the importance of destroying the sputa of consumptives.

The pamphlets on the restriction and prevention of the other most dangerous communicable diseases—diphtheria and scarlet fever—were ordered reprinted for distribution among the neighbors of those sick with these diseases throughout this State.

A proposed pamphlet on the "Restriction and Prevention of Measles" was thoroughly discussed by paragraphs, amended, and the Secretary was directed to print and distribute the document, as amended, for instruction, and as an aid in the restriction and prevention of this disease, which, the Board declares, is a disease "dangerous to the public health," that causes many more deaths in Michigan than small-pox does, and which should be dealt with according to the laws in Michigan.

The age at which most deaths occur from measles is that between one and two years. This is the age of greatest danger, and all should take especial care to guard children at that age.

The following were adopted:

WHEREAS, This being the first meeting since the termination of the services of Drs. Lyster and Kellogg, as members of the State Board of Health, it is an appropriate time to place upon record our high appreciation of the value of their services; therefore

Resolved, That the eighteen years gratuitous services of Henry F. Lyster, A.M., M.D., as a member of the Michigan State Board of Health, entitle him to the gratitude of the people of Michigan; that through his labors on the Board and in its committees, especially the Committee on Epidemic, Endemic, and Contagious Diseases, his voice and pen have done excellent service in molding and sustaining that part of the public-health work of the State which relates to the restriction and prevention of those important diseases; that we do not forget that, although the bill which he drew was not the one which became the act establishing that Board, it was largely in consequence of his efforts, as a special committee, that the present effective Board of Health for the city of Detroit was established by the Legislature in 1881; that in

connection with the sanitary conventions under the auspices of this Board, his numerous papers read, impromptu discussions, and public addresses—on the sanitary drainage of land, sewerage and house-drainage in cities, the use of alcoholic liquors, and on other topics—have done much toward the formation of public opinion on many sanitary subjects.

Resolved, That the Secretary of this Board be directed to transmit a copy of these resolutions to Mrs. Lyster, and to express the hope of the members of this Board that Dr. Lyster may return from his present trip in Europe in good health, and may long continue, as we have known him to be, the philanthropic physician and sanitarian.

Resolved, That the vigorous sanitary work of Dr. John H. Kellogg, during the twelve and a half years that he has been a member of the Michigan State Board of Health, is work of which any man might well be proud, and all the more because a considerable proportion of it has been done in committee and otherwise under such circumstances that general public recognition of it was impossible—work which has led to the improvement of the ventilation and sanitary condition of many public and private buildings, and has conduced to the general up-building of sanitary progress throughout the State. Dr. Kellogg's experience in the planning, construction, and use of buildings for many inmates, and his conference with architects and others concerned in the planning and construction of buildings for the various State institutions whose plans have come before this Board for examination and report, have made him especially useful to the State in the examination of plans for public buildings, his advice on these subjects has been especially valuable. His public addresses and discussions at the sanitary conventions throughout the State are well-known. The people of Michigan are richer in money, health, and life because of the faithful gratuitous labors of Dr. John H. Kellogg, as a member of this State Board of Health.

The Polyclinic.

INFANTILE DIARRHŒA.

BY far the best method of treating diarrhœa in children is to eliminate, by means of a purge, the irritating cause, and then to treat antiseptically. The sulpho-carbolate of zinc, so highly extolled by Prof. Waugh, is a preparation of definite value in accomplishing this point. Bismuth and calomel, frequently repeated in small doses, give good results. Opium should not as a rule be employed in the treatment of diarrhœa in small children. It deadens the susceptibility of the bowels to the irritant, prevents elimination of septic matter, and induces sympathetic or positive brain disturbance.—*E. L. B. Godfrey.*

Internal cleanliness will greatly promote health, if there is anything in Metchnikoff's phagocytosis demonstrations. The wandering amœboid cells of the body should have a better chance to build up tissues than when engaged in attacking hostile matters from without. Pure water and well cooked food will oftener and directly prove more useful than medicines in the restoration of health.

The June, 1891, *American Naturalist's* leading article by Kellogg, on The Wandering Cells, is an excellent summary of our present knowledge of phagocytosis, and should be read by physicians generally.—*S. V. Clevenger.*

THE USE OF PEROXIDE OF HYDROGEN IN CLEANSING THE MIDDLE EAR OF PUS.—Recognizing the difficulty of cleansing the middle ear of pus, which, by the way is the most important point in the successful treatment of suppurative middle ear disease, I have for some time past endeavored to devise some means for its accomplishment. Washing with the syringe, or through catheter, blowing out through the Eustachian tube with air bag, and the swabbing

out of with absorbent cotton, have all proven ineffectual in a large number of cases in my hands. Especially has this been the case in a patient just discharged cured, who had been troubled with suppurative middle ear disease for the past three years. There was a triangular perforation through tympanum involving about one-third of that membrane through which could be seen the diseased tissue of the middle ear covered with a grayish deposit of pus. Washing with water, inflation, failed to remove it, and the cotton swab proved too painful for use. So I concluded to try the peroxide of hydrogen, and am glad to report the most satisfactory result. After pouring in the ear a few drops of the solution, immediate effervescence begins and continues until every particle of pus is removed. I then dry with cotton, and the ear is ready for the boracic acid, carbolic acid solution, or any medication preferred. The cure was completed in about ten days. My attention was called to the remedy in cleansing out pus cavities by Dr. J. L. Mewborn, who has used it for some time in the treatment of alveolar abscess and abscess of the antrum.

—Taylor, in *Memphis Med. Monthly.*

EUCALYPTUS IN THE TREATMENT OF INTERMITTENT FEVER.—In the year 1880 I called attention to the effects of a combination of tincture of eucalyptus and quinine, with a frequent aperient of Carlsbad salts in a very intractable case of ague, and I am now able to confirm the opinion which was then entertained as to the likelihood of this treatment being generally useful in cases of a like nature. The same patient, whose case was then reported, has since come to me twice with the same disorder, and on both occasions the result of the treatment was an almost immediate cessation of the attacks. The last time he told me he was in one continuous fever from Brindisi home. He had regular night-sweats, and was in reality a mere shadow of himself. Since this visit to England he has been almost entirely free from fever.

His wife last year related to me the case of a lady at the station where they had last been, who was apparently dying, when the medical men in attendance were asked whether they would mind trying what had been of such service to her husband. No objection was raised, and she began to show signs of improvement almost immediately the medicine was commenced.

Another case in which the treatment was adopted with equally good results was that of a chaplain, who had been for some years resident in the Madras presidency.

Dr. MacLagan, in writing on the treatment of rheumatism by salicin, says he was led to its use by the idea that nature always provides a remedy in those districts where a particular form of disease is most prevalent. This idea would seem to be borne out by the use of eucalyptus in intermittent fever.

A more pleasant way of combining it with quinine is to use the extract, and make it up in the form of pill. Supposing each pill were made to contain 3 grains of the extract of eucalyptus and 1 of quinine, two would have to be taken three times a day; and a teaspoonful of Carlsbad salts, every morning or every other morning as required.

It would be satisfactory to me to learn the experience of those who may put this method of treatment to the test, and to see whether it bears out the idea now formed as to its usefulness.

I may add that I have used eucalyptus with apparently beneficial effects in some cases of influenza.

—Atkinson, in *The Practitioner.*

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ELEGANT PHARMACY.

"Tempora mutantur et nos in illis."

TIME was, and not so long since, when physicians prescribed or dispensed, as the case might be, huge doses of liquid or dry mixtures of most nauseous taste and sickening smell. These the unfortunate patient usually submitted to without a murmur, for "it was his duty and he did." Neither he nor his physician knew of an easier or more palatable way of giving or taking medicine, so we impute to them no fault.

The writer sorely remembers his early experiences with the family physician. Let him complain, say, of a little digestive trouble, and the old physician was summoned forthwith. His course of action was invariably the same: Seating himself at a table, he would ask for some paper. Six or eight little slips were cut and laid side by side. Next the small hand-bag full of terrors was opened and two bottles extracted. From one of these some calomel was taken, and a generous amount dropped by means of a penknife on each paper. The other bottle contained, oh, thrice sad memory! powdered rhubarb. The mere sight of this nauseous stuff would cause a little heart to drop, and a little stomach to turn a somersault. "Give him one of these powders every two hours, and when he has taken them all, let him have a little castor oil or salts to move his bowels briskly."

Me miserum! To this day the odor of rhubarb is almost more than can be borne.

But, as suggested at the head of this article, "times change," and unless we are content to fill a secondary place, both in our own mind and in that of the community, we must fulfill the remainder of the classic sentence, "and we with them." The particular change to which we allude is in the amount and character of the medicines that the profession are nowadays wont to prescribe. Owing probably in good part to the influence of homœopathy, there have been

within late years marked reductions in the average dosing, and great strides towards palatability. It is of little avail to assure patients that medicines are not food; that it is one of the wise provisions of Nature that plants not fit for food and harmful to life are endowed with obnoxious tastes in order to warn of danger the ignorant or unwary. The laity are rapidly becoming acquainted with the fact that most medicines can be made at least somewhat palatable, and though agreeing that Nature often manifests singular wisdom, yet maintain that certain of her provisions it were well to circumvent.

There are exceptions, however, to what has just been said. The effect of old practices is seen by the fact that even yet there are many who have little faith in the efficacy of medicine unless it has a bad taste, or in surgical procedures which are not accompanied by a howling pain. "The last medicine must be very strong, doctor; it is so hard to take," is an expression doubtless familiar to every reader; and probably most of those who glance over this have given an extra twinge to some patient who would not feel that he was getting the worth of his money, unless he felt it through his sensory nerves.

Apropos of this, the writer was called, some time since, to attend in a family, the head and father of which had the day before discharged the homœopathic medical adviser. The services of this disciple of Hahnemann were dispensed with, not so much on account of his principles of practice as because of the fact that the four-year-old hopeful, who chanced for the once to be the patient, had incontinently devoured at one sitting the medicine intended for several days' treatment, and finding it highly palatable had asked for more.

This did not seem to be in the nature of things, hence the change. The first question that greeted the writer's ear upon entering the house was from the aforementioned hopeful: "Have you got any sugar for little boys?" It is needless to add that the medicine prescribed on this occasion aroused no gustatory enthusiasm in the family's young scion.

The aim and desire, however, of the vast majority of people at the present time is to have things easier, both in sickness and in health. For the patient who can afford it, there are numberless contrivances in the way of pans, cups, bowls, basins, water-beds, cushions, bed-rests, and the like, fashioned with the object of securing either greater physical comfort or safety. In place of the few crude instruments of years ago, the surgeon now has a multitude of particular instruments for the quicker, less painful, and safer performance of this or that operation. Hand in hand with these advances towards comfort are the efforts of the great drug firms to render efficient and palatable the resources of the therapist. A Western medical editor lately dipped his pen in gall to write about the methods of advertising adopted by most of our progressive firms. He strongly objects to having samples left with him, regrets that it is not considered courteous to kick the agent out of his office, and says that the sample bottles simply stand on his shelf until well covered with dust, whereupon the maid relegates them

to the ash barrel. He considers the ready-made medicines an imputation on the physicians learning, and considers a doctor who cannot write a prescription more satisfactorily for himself than that compounded beforehand by a drug firm, not worth a tinker's blessing; using, though, if we remember rightly, some more forcible Western measure of value.

With that portion of his article which declares it impossible for one small head to hold a working knowledge of all the various preparations now on the market, we fully agree; but we take exception to much of the remainder. Though these firms are not in business from a philanthropic point of view, they are doing a good work.

Most of the benefit is probably felt outside of the great cities, in places where the physician either does his own dispensing or prescribes through his country pharmacist, who has not at his command all the conveniences of his city brother. Physicians do not prescribe each day every medicament mentioned in the pharmacopœia. As a rule they confine themselves to the more important drugs, and often to certain well-tried combinations of these drugs. Many such, or almost similar combinations, are already prepared by the manufacturing drug firms, and prepared in a manner far more agreeable to both palate and eye, and at the same time more efficient in action, than is possible either to the physician himself or his home druggist. We see no reason, therefore, why he should not make use of these elegant preparations on any occasion on which their ingredients seem to be indicated.

Of course a firm that wishes to sell something to doctors must advertise in a medium that medical men read; namely, the medical journals; but it can do more. A physician might notice a preparation advertised a dozen times in the journals without having any particular interest called forth; but if he has actually seen or used this particular preparation, he is far more likely to remember it afterward, and to use it again. To our mind, the annoyance connected with such advertising is chiefly confined to the custom some firms have of giving a physician a box or bottle containing all the way from three to six pills; or, perhaps, it is a half-ounce bottle of an alterative medicine, to be given in dessertspoonful doses. Of these generous samples the physician is respectfully requested to make a thorough trial, and kindly to report his results. Here the ash barrel receives its own.

No intelligent or progressive physician will allow himself to depend entirely on ready made medicines; he will ever have use for combinations of his own prescribing, as well as for some or many of the preparations referred to; while the ignorant or lazy practitioner will find in them a real boon, both to himself and to his patients.

QUACKS: THEIR RAISON D'ETRE.

IN another column will be found a letter from a layman, who has been under the treatment of the Keely people. We have given some attention to this man, because people who had been to him reported that he had cured them of the alcohol or

chloral habit. The gentleman who wrote the letter mentioned is a professional man of more than ordinary ability; but who has been under the cloud of alcoholism for many years. He stated to me that Keely had done him more good in four weeks than he had obtained from a year of total abstinence. The appetite for liquor had been entirely removed; the aspirations of his young days were returning, and altogether there was a most satisfactory change for the better. He was still somewhat tremulous, and neuralgic; though some months had elapsed since his "cure."

Whether these results will prove permanent remains to be seen; whether they do or do not, the results are sufficiently striking to warrant an inquiry into the means by which they were brought about.

This case is that of a man who had consulted many physicians, and looked on all sides for help, but found it only at the hands of this quack. One physician substituted the chloral habit; the majority gave him simply the neglect with which the alcoholic is usually mistreated.

Our readers will not suppose that we wish in any manner to uphold this or any other method of quackery; but if any means succeed in rescuing a man from the slough of drunkenness, it is a duty we owe to the community to rescue the remedy from the hands of a charlatan and place it in the hands of the profession.

Are Keely's methods original with himself, or are they merely applications of remedies whose powers are well-known to the profession, and simply neglected? He claims the former; but even a cursory examination shows that the latter is the true explanation. We have already called attention to the great advantages enjoyed by the physician who treats his patients in an asylum. This alone renders many a case curable that could not possibly be cured at the patient's home. The reasons for this relate with the moral effect upon the patient, and the superior opportunities for studying the case enjoyed by the medical adviser. When the patient has been received into an asylum or retreat, the rest consists in the application of remedies; and in the armamentarium of the intelligent modern physician are to be found weapons adapted to every phase of this warfare.

From the accounts obtained of the writer of the above letter, we find that the Keely people do not confine themselves to one remedy, but employ a number, adapting them to the circumstances of each case. Our correspondent is probably right in attributing to atropine the principal rôle; but, strychnine, cocaine, and morphine are, undoubtedly, employed on occasion. As he says, there is no bichloride of gold; but there is a double chloride of gold and sodium. Analysis has, however, proved the absence of gold in any form from the preparations sold by Keely as containing it.

The whole "secret" of this party, then, consists simply in this: The patient is taken from his home, separated from his friends and his work, and devotes his entire energies to the "cure." He is properly fed, properly nursed, and gives such drugs as the experience of the regular medical profession has shown

to be specially curative to the alcohol habit, and specially suited to the case of each patient.

Before raising an outcry against this and similar quacks, we would say to each physician who bewails the loss of a patient cured by these people: "Have *you* taken with your patient as much pains as these people have? Have *you* searched through books and journals to find all the advances made in the treatment of alcoholism, since you were a student? If you have *not* done this, do not blame the patient who obtained from a quack what *you* were too careless to give him. If you *have* done so, you acknowledge the superior ability of the quack." In either case, we, the members of the regular medical profession, are the persons directly responsible for the existence of successful quackery.

Annotations.

THE INITIATIVE.

NAPOLÉON was considered pretty good authority upon matters military, and he always insisted upon the importance of taking the initiative. There are many occasions in which the physician must show his generalship by acting upon this maxim. An accident occurs, and a half dozen medical men run to the spot. One throws off his coat, opens his case, and goes to work at the victim, while the others help, or look on. A woman is undergoing the pangs of maternity, and her groans begin to make the spectators uneasy. The doctor sits quiet, saying little, doing less. One begins to suggest this, another to recommend that; and finally the doctor is flatly ordered to "do something, or send for a man who will."

A more skilful manager does the suggesting himself. He sends the most uneasy person present after chloroform, another for brandy; others see to the hot water, the baby clothes, the binder, the granny pins, the disinfectant solutions, etc., etc. He comforts the sufferer, holds her back, gets the nurse to give her hands to the patient to pull during pains, or fastens a sheet to the bed post for the same purpose. In a word, he busies himself, and finds something for every individual present to do. Maybe he doesn't know the presentation and couldn't describe the Veit Smellie method to save his neck; but the people are all satisfied to have some one take the authority, and the new mother says, "Oh, doctor, you helped me *so* much! I'll never forget your kindness." And she never will.

Take the initiative!

Never mind whether you are the best or not. Assume that you are until some one proves himself the better. Nineteen times out of twenty the crowd coincides with the first man who gets up and tells them what they all think.

IT'S ALL IN YOUR EYE.

THE lay press is extensively copying an article published by some would-be scientific reporter, to the effect that the snakes frequently seen by one who has looked too long upon the roseate wine, are merely the blood-vessels of the observer's own eye. According to this thoughtful article the explanation is very simple: Alcohol congests the blood-vessels;

they are naturally tortuous, and thus when the congested blood is surging through, the appearance is not unlike that of snakes. The different sizes and kinds of vessels account for the large and varied assortment of reptiles usually seen. Once before a similar "explanation" of this phenomenon was given, but we thought that the refutation which immediately followed would prevent such an absurdity from again appearing.

DR. FRANK H. POTTER, only son of Dr. William Warren Potter, of Buffalo, died, July 16, of appendicitis. An operation had been performed, but blood-poisoning set in.

Dr. Potter was but thirty-one years of age, but had already established his reputation as one of the rising men of his profession. At the time of his death he was Clinical Professor of Laryngology in the University of Buffalo, and was associated with his father in the editorship of one of our most valued exchanges—the *Buffalo Medical and Surgical Journal*.

We tender our sincere sympathy to his family in their bereavement.

ANOTHER amusing report of a scientific statement relates to a chicken which was said suddenly to have been deprived of its feathers by a lightning stroke. Commenting on this incident the reporter remarked that we are all familiar with the action of an electric current in causing even the longest hair to stand straight out from the head; and continuing, he naïvely asserts that doubtless if the current were increased each particular hair would be pushed out by the root.

Letters to the Editor.

THE KEELY INSTITUTE.

I HAVE been giving some thought to the "Keely Cure," and from all I have been able to learn by comparing notes with others, and from cross examination of Drs. Truax and Estep, I have come to the conclusion that Keely is a fraud. He uses no bichloride of gold. In fact, there is no such thing. Analyses carefully made determine that there is no gold in the tonics. These consist of cinchona rubra, capsicum, etc. Dr. Estep says gold is not injected. The whole cure is in the injections. I think they are composed of drugs which Dr. Keely says will *not* cure. The main object of his books is to deceive the unfortunate and *conceal* his remedies. The injections are given out only to tried men who are under special contract to guard them against all comers. At Philadelphia no one is permitted to enter the doctor's office alone. The woman who cleans the room must do so in presence of the proprietor. The tonics might get a person with a good stomach and liver off a "batter," but they *cure* nothing.

The basis of the "Keely Cure" is atropine. I have examined carefully, and have submitted the matter to other cured men, and we agree that the effects, good and bad, are those of atropine. Keely, in his book on the opium habit, devotes much space to his experience with atropine, and to condemning it as a cure. It may be that he uses morphine in combination with it, but he distinctly says that he does not. I am not mistaken, I think, when I say that atropine performs the cure, while the cinchona tonic supports. The tonics *must* be taken in connection with the injection of atropine.

J. E.

HOUSEHOLD REMEDIES.

AMONG the enumerated "kitchen remedies" (vide, TIMES AND REGISTER, July 11, page 32) there are many which were mere matters of my experimentation, but on the other hand, there are also many which I have used for my own person. To be sure, their number is too great to be enumerated all at once, so much so indeed, that while making additions to what I have written already on this subject, there is still an ample space for many others to come.

Putty, applied to abscesses or to any other local inflammations remarkably cools and relieves the pain. Decoction of cinnamon lessens the excess of menstrual flow. Kerosene externally is good for alopecia. Salt taken internally is the best remedy for swallowing leeches (afterwards make a clysm from salt water). Decoction of dry raspberries, used as tea in an exceedingly valuable sudoriferant, in cases of cold. A pill made from melted sugar mixed with black pepper put within the cavity of a carious tooth lessens the pain. The chewing of blotting paper produces vomiting. Franklin's air bath, *i. e.*, pacing the room with open windows in *Adam's costume* for a short time, is a good remedy for insomnia independent of serious diseases. Carrot is a local remedy for a cancer, and taken internally in excessive doses is good for jaundice. A powder of black pepper in whiskey is good for painful and enfeebled stomach. (One of the German medical authorities says: "der pfeffer ist besonders als eins der besten magenstärkenden mittel zu empfehlen, nur nicht gestossen, weil er daun zu sehr erhitzt. Alle morgen 8 bis 10 ganze weisse pfefferkörner zu verschlucken, und dies monatelang fortzusetzen ist eine der besten magenstärkenden ruren bei langwierigen mangel des appetitis, blähsucht, langsamer verdauung, anhaltender magenverschleimung," etc.)

Sugar is a good cooling drink: 6 ounces of sugar dissolved in water, used as a drink is good in fevers, excitement, heating of the body, fright, and cough; in cases of feeble stomach, as a drink in the morning on an empty stomach; in restless sleep, as a drink before going to bed; coffee, drank with an excessive amount of sugar, produces less heat than without the latter; heaviness of the stomach, consequent upon heavy meals, is overcome by a glass of water, sweetened with sugar. Wine vinegar is a good refreshing temperature-lowering agent, used as a lotion for the whole body, not excluding the head; for cases of cold as a rubbing; as a local washing in bites of insects; as a lotion for the hands of those who come in frequent contact with patients of contagious diseases; as a drink in fevers (a teaspoon of vinegar to a glass of water); as atomization in dwellings for purifying and refreshing the air. Milk is a well-known laxative and easily digestible in convalescence; as an antidote for mineral poisons. Sweet oil, tepid, may be dropped into the ear after the entrance there of an insect. Spider's webbing is a local hemostatic and pain relieving agent in a cut surface. Tepid soap water taken internally produces vomiting; and active as a clysm for constipation. Fresh urine is a good lotion for bee's stings. Salt or mustard is an effective constituent in a foot-bath. Wine or whiskey is a tonic in old age, or during convalescence from certain diseases. Horse-radish is useful in la grippe. Water! I hope that the time will come when water will play the first rôle in treatment of diseases, whether it will be applied in the form of a spray, stream, lotion, rubbing, baths, sponge baths, bathings, drinks, compresses, at different temperature, matters little. With

the introduction of water, as a principal agent in the treatment and as a prophylactic, the number of invalids will be lessened at about 50 per cent. It is true pathology will lose, but—what is more important for us—the loss will be fully compensated by the gain in therapeutics. Wine is a remedy! milk is wine for a child, wine is milk for old age, but water is everything for everybody.

To have remedies at hand is very important!

S. SEILIKOVITCH.

338 SPRUCE STREET.

Book Notices.

In August Lippincott's George Grantham Bain writes of "Re-roasted Chestnuts." Some of the lapses of the exchange editor are very amusing; as for instance, that in which he publishes as new, the story of Chief Justice Marshall carrying home a fowl from market for a stranger, and accepting a fee for it. The story then turns up in a well-thumbed "First Reader."

A COMPEND OF ANATOMY AND PHYSIOLOGY. Illustrated by the New Model Anatomical Manikin. By M. C. TIERS. New York: Fowler & Wells Company, 775 Broadway. 1891. Cloth. 8vo. pp. 271.

This is a book written by the artist who designed the publishers' manikin, and is intended as a key or explanation thereof. A short glossary is included.

PRACTICAL INTESTINAL SURGERY. By FRED B. ROBINSON, B.S., M.D., Professor of Anatomy and Clinical Surgery, Toledo Medical College. Vol. I. 1891. Geo. S. Davis: Detroit. Cloth, 50 cents. Paper, 25 cents.

The author tells us that the loss of a patient from intestinal perforation impelled him to the studies that result in this book. He presents for the consideration of the profession the "segmented rubber and raw-hide plates, and a new invagination operation;" also a modification of Jobert's operation, by omitting the invagination sutures.

PHILADELPHIA HOSPITAL REPORTS. Vol. I. 1890. Edited by CHARLES K. MILLS, M.D. Philadelphia: Detre & Blackburn, 35 North Seventh street.

Not the least valuable contributions to medical literature are the reports from the great European hospitals, Guy's and St. Thomas, in London; La Salpêtrière, in Paris, etc. The Philadelphia Hospital is probably as well provided as any of these, in the variety of its clinical material and the ability of its staff to utilize it. It is, therefore, with much pleasure that we welcome this first report, and hope that the enterprise will not meet with a death as premature as that which befell the Pennsylvania Hospital reports. The Philadelphia Hospital is without exception the greatest medical school in America; and its reports are capable of being made extremely valuable. Passing over the interesting reminiscences of Drs. Agnew, Stillé, Bush, and Mills, occupying one hundred and five pages, there are twenty-five papers, clinical records, studies in therapeutics, and pathological investigations. Most of these deserve a better fate than that of burial in a volume of transactions, that, however highly it may be prized by those who obtain it, can never have more than a very limited circle of readers. These papers occupy two hundred and three pages, leaving thirty-four for Dr. Curtin's account of the epidemics in the hospital during twenty-eight years, and Drs. Mills' and Cur-

tin's notes on the history and organization of the hospital since 1860.

The material contained in this volume is so valuable that it is a matter of regret that it has not been made accessible to the profession at large, through the medium of a monthly periodical.

The Medical Digest.

PRACTICAL POINTS FROM THE MEDICAL WORLD.

If the author of the aphorism "Meddlesome Midwifery is Bad" had only been strangled at his birth, thousands of long-suffering women would have had great cause for rejoicing at his timely taking-off.

—Benj. Edson.

J. W. SWARTZ describes a case presenting these symptoms: Pulse, 48; respiration, 13; stertor; pin-point pupils; could not be roused to sensibility. These symptoms came on suddenly, while the patient was at the breakfast-table. From this alarming condition he recovered completely when his bowels had been relieved of a large accumulation by means of enemas.

FOR RHUS POISONING.—

R.—Sodii hyposulphitis..... 3ss.
Glyco-phenique (Declat's)..... f 3ij.
Aque..... f 3ivss.

M.—S. Apply constantly, on compresses.

—R. L. Patterson.

DR. A. G. OSTERMAN suggests the use of sulpho-carbolate of zinc as a remedy in pneumonia, he having used it for two years with remarkable success. He gives 2 grains every four hours.

The dangerous character of pneumonia with diarrhoea is well known, and in these cases, at least, the zinc may prove of value.

FOR "DRY" ECZEMA.—

R.—Fresh butter..... 3ij.
White wax..... 3ss.
Red oxide of mercury..... 3ijss.
Commercial oxide of zinc..... 3j.
Camphor dissolved in olive oil.... 3j.

Melt the butter and wax; when cold stir in the other ingredients, finely powdered.

S. Apply at night to affected part.

—F. P. Lonergan.

DR. H. KNAPP, in his own case of enlarged prostate and atony of bladder, reports great improvement from the use of saw palmetto persistently for a long time.

FOR BURNING FEET.—Soak them in hot, saturated solution of sodium carbonate for half an hour, once or twice daily.

For *Chilblains*.—Equal parts of the oils of fireweed and of cajeput, applied locally.

For *Bunions*.—Olive oil saturated with nitrate of potassa, applied on a compress at bedtime.

—G. O. Fraser.

FOR CORNEAL OPACITIES.—One-tenth-grain doses of cannabis sativa four times a day. When it begins to fail give gr. $\frac{1}{10}$ of sulphur twice a week, and then go back to cannabis.—P. M. Cooke.

E. SMITH records the case of a lady who desired to have an easy labor, and followed the directions of a book, avoiding all bone-forming foods. The lady lost all her teeth, and the babe was born with cranial sutures so firmly united that the forceps had to be employed.

FRENCH NOTES.

A. E. ROUSSEL, M.D.

SUPPRESSION OF THE LACTEAL SECRETION BY THE ADMINISTRATION OF ANTIPYRINE.—M. H. Guibert having occasion to administer antipyrine to a nursing woman, was astonished to notice as a result that the lacteal secretion was almost completely suppressed. Following this indication, he systematically administered this drug to nineteen wet nurses, seven of which had already nursed their children for a few days, while in the remaining number the children were not applied to the breast. The average dose employed was 3 grains every two hours, and the patients were nowise restricted as regards their diet, etc.

The results were so uniformly successful, that the author arrives at the following conclusions:

1. That antipyrine is of very great service in cases when he desires to suppress the lacteal secretion of the newly delivered.

2. That this medication is most inoffensive.

—*Archives de Tocologie et de Gynecologie*.

TREATMENT OF HEMORRHOIDS.—For internal hemorrhoids:

R.—Vaseline..... ½ ounce.
Chlorohydrate of cocaine..... 3 grains.
Antipyrine..... 22 "
Suet..... 15 "
Wax q. s. to make sufficiently solid.

Apply a small quantity within the anus two or three times daily.

When the hemorrhoids have a tendency to protrude, if there is no contraction of the sphincter, or after the sphincter has been dilated, we have often used the following with success:

R.—Vaseline..... 300 grains.
Cocaine hydrochlorate..... 2 "
Tannin..... 15 "
Extract of rhatany..... 7 "
Extract of belladonna..... 1½ "
Wax q. s. to make sufficiently solid.

The addition of a certain quantity of wax is necessary to make the pomade sufficiently solid, or else it is very difficult for the patient to make it penetrate into the rectum.—*La Médecine Moderne*.

A PROLONGED FORM OF ACUTE COCAINE POISONING.—H. Hallopeau reports in the *Bulletin de Thérapeutique* the case of a man forty-eight years of age who consulted a dentist on account of a violent toothache, due to a caries of the second inferior molar on the left side. A fresh solution of 1 centigramme of hydrochlorate of cocaine was prepared, and about 8 milligrammes was injected in the neighborhood of the decayed tooth. Five minutes after the injection the patient was seized with intense cardiac pain, accompanied by a sensation of smothering which causes an apprehension of speedy death. The pulse now became so extremely rapid and thready that the pulsations could not be counted. The patient insists on arising from a recumbent position, and is seized with a violent agitation; clutches wildly at his heart, and laments loudly regarding his condition; wild; rapidly walking around the apartment, and breaking various objects with which he comes in contact. This condition continues for about ten minutes, after which he gradually becomes calmer, and is allowed to return home, thoroughly prostrated and suffering from functional troubles, which persist for several minutes. The sleep is troubled; the patient is agitated, and wakes incessantly, whereas he ordinarily sleeps very soundly. He suffers from

a very painful and continuous cephalalgia. A less pronounced return of the paroxysm is noticed the next day, and again for several days following.

Hallopeau arrives at the following conclusions :

1. A single interstitial injection of hydrochlorate of cocaine may give rise, not only to immediate accidents of a grave and dangerous character, but also to prolonged troubles of a painful nature.

2. These troubles resemble to a great extent those which are observed a few minutes after the injection ; they consist particularly of a persistent cephalalgia, accompanied by a profound malaise, insomnia, *d'engourdissement* of the limbs, and of attacks of faintness, with vertigo and prostration, combined with cerebral excitement, which manifests itself by loquacity and a great agitation.

3. Small doses of the medicament may suffice to cause the above.

4. Their duration may be of several months.

5. They are especially observed in subjects of an excitable, nervous system.

6. They may be attributed to an elective action of the poison on certain nervous centers.

DIMINUTION OF VIRILE POWER BY THE INTERNAL USE OF ANTISEPTICS AND PARTICULARLY OF SALICYLIC ACID.—Dr. Van den Corput, of Brussels, calls attention to the diminution of virile power which he has observed in patients to which he had prescribed antiseptics, such as salicylic acid, quinine, menthol, carbolic acid. The author supposes that these antiseptics act on the blood elements and on the seminal cells as on inferior organisms. The spermatozooids become in effect completely immobile under the microscope, like all the leucocytes, which lose their amoeboid movements, and can no longer effect their migrations.

Salicylic acid acts in the same manner upon the ovary, and causes the lengthening of the menstrual period.—*Revue de Thérapeutique*.

TREATMENT OF PLEURISY BY ANTIPYRINE.—In a recent number of the *Médecine Moderne* Salamon pointed out the good results which he had obtained by the employment of salicylate of soda in the treatment of pleurisy. Dr. Clement, of Lyons, has used antipyrine in the same class of cases, that is to say in all cases of febrile or non-febrile pleurisy, acute or latent, but not hemorrhagic or purulent. The dose ordinarily sufficient and always necessary is 90 grains a day, administered every four hours in divided doses. The medicament should be continued for some days after the liquid is absorbed in diminished doses, about 60 grains for example, or else there is danger of a relapse.

The day after the treatment is instituted, or at the latest the day after the superior margin of dullness commences to descend, often in forty-eight hours, the dullness disappears. This doubtless is due to a specific action on the pleurisy analogous to that of the salicylate.

EXPECTORANT MEDICATION (Rossbach):

R.—Chlorohydrate of morphine $\frac{1}{2}$ gr.
Chlorohydrate of apomorphine... $\frac{1}{2}$ –1 gr.
Dilute hydrochloric acid..... 10 drops.
Distilled water..... 4 $\frac{3}{4}$.

Sig. One teaspoonful every two, three or four hours.

—*La Médecine Moderne*.

DR. CROUSE recommends hydrastis canadensis for night sweats in phthisis, administering thirty drops of the fluid extract every evening.

—*Berliner Klinische Wochenschrift*.

For after-pains, Dr. Mizrachi recommends 15-30 grs. antipyrin.—*Med. Chir. Centralblatt*.

To test the purity of iodoform gauze, place a piece of gauze in ether. If pure, the iodoform will be dissolved and the gauze become perfectly white.

—*Zeitschrift des Oesterreichischen Apotheker Verein*.

COCAINE in combination with nitrate of silver, calomel, or yellow oxide of mercury loses its anæsthetic powers. In combination with nitrate of silver it becomes a positive irritant.

—*Rundschau f. Pharmacisten*.

ROSE IN DIARRHŒA.—Alexejewski recommends the infusion of the flores rosar rubr., and flores rosar centifol. in persistent diarrhœa. The dose is for children one glassful daily; for adults, 2-3 glassfuls. The taste is very pleasant. He claims excellent results from such treatment.

—*St. Petersburg Medizinische Wochenschrift*.

F. THOEN recommends the following mouth-wash for fetid breath :

R.—Saccharine,
Sodii bicarb.....āā gr. xv.
Acid salicylici..... 3j.
Alcohol..... 3vj, 3ij.

M.—S. A few drops in a glass of water.

—*Internat. Klinische Rundsch.*

SALOL IN SUMMER DIARRHŒA.—Dr. Weber reports excellent results in summer diarrhœa by using salol. He says, that after using calomel and bismuth, argent. nitr. without success, he gave 0.2-0.25 salol with 1 drop of tinct. thebaic in powders twice daily, and generally after one or two powders the diarrhœa decreased in frequency, lost its bad smell and regained its normal color. After a few more powders even the most obstinate cases were fully recovered.

—*Correspondenzblatt Schweizer Aerzte*.

ANTIDOTES FOR MORPHINE.—Dr. Kossa by experimenting on rabbits for a morphine antidote found that neither large nor small doses of picrotoxin prevent death in morphine poisoning, because it creates spasms of the muscles of respiration and the patient succumbs through over-exertion. This spasm may be relieved by paraldehyde. By combining both picrotoxin and paraldehyde, Kossa claims that even toxic doses of morphine may be counteracted.

—*Wiener Med. Presse*.

INTRA-OCULAR INJECTIONS.—Abadie speaks highly of the therapeutic value of intra-ocular and subconjunctive injections. He quotes a case of syphilis of the eye, which showed excellent results from the intra-ocular injection of one drop of a 1-1,000 sublimate solution.

In a case of hemorrhagic glaucoma where neither iridectomy nor sclerotomy gave relief, and the pains were of such intensity that only enucleation was thought to give relief, Abadie succeeded in quieting the pains, and prevented enucleation by intra-ocular injection of one drop of ergotinin. Darière (Paris) uses systematically subcutaneous sublimate injections in iritis specifica, chorio-retinitis centralis, chorio-iritis, and all forms of keratitis.

—*Wiener Medizinische Presse*.

IODOFORM IN DIPHThERIA.—Dr. Dunin uses iodoform exclusively for the treatment of diphtheria. Dr. A. Pulawski describes the method as follows: Touch the diphtheritic parts with powdered iodoform or blow the powder on the parts with an insufflator. Four and one-half grains of iodoform two to three times daily is sufficient. Drs. Dunin and Pulawski claim excellent results from such treatment.

—*Berliner Klinische Wochenschrift*

PUERPERAL ECLAMPSIA DUE TO A MICROCOCCUS.—Dr. Favre claims to have discovered a micrococcus in the placenta of a case of puerperal eclampsia. Injections of young cultures of this micrococcus into the blood of rabbits, caused in five of these animals prodromal symptoms, such as muscular weakness and temperature showing a state of collapse, followed by clonic spasms, especially in the forefeet. Afterwards severe tetanic convulsions with opisthotonos and spasmodic contractions of the facial muscles appeared. After two or three attacks the animals died. Favre claims on the strength of the above that puerperal eclampsia is caused by a micrococcus.

—*Virchow's Archiv.*

INDIGO.—Dr. Johns recommends indigo as an emmenagogue, which he prescribes in the following form:

R.—Indigo..... 3j.
Bismuthi subnitrat. 3ij.

M.—S. Three times daily a teaspoonful in a small glass of water.

With this treatment Dr. Johns claims that a certain degree of softening of the cervix occurs, followed by a serous secretion, and finally the menses appear. The urine becomes brownish-green, with bad smell, and diarrhoea of fetid character appears. Of thirteen cases of amenorrhoea, twelve cases were completely cured, one case proved to be pregnant. One patient took indigo for four weeks without showing any ill effect.—*Wiener Medizinische Presse.*

CANTHARIDIN.—In Japan some experiments have been made with Liebreich's cantharidin, on four patients with leprosy, and one with tuberculosis. The injections gave rise to severe pain. No changes occurred at the site of the injections, except that in one patient an abscess formed. There was fever following each injection, in one case reaching 40° C. No rise of temperature occurred in one patient with tubercular laryngitis.

In leprosy the tubercles shrank and softened; the ulcers began to improve, and some entirely healed. In some parts the sensation improved, but, on the whole, there was no marked change in the anesthesia or in the enlarged nerves.

In the tubercular laryngitis, cough and expectoration were remarkably diminished.—*Sci i kwai.*

DERMATOL.—Heinz and Liebreicht recommend "dermatol" in place of iodoform. They conducted a number of experiments at the Pharmaceutical Institute, in Breslau. Dermatal is a compound of bismuth and gallic acid (basisch gallussaures bismuth), it is a very fine, saffron-yellow powder resembling very much iodoform. Neither air nor light affect it. It is odorless and acts as a "drying antiseptic." Being insoluble in any of the common solvents its antiseptic powers can only be procured by direct contact. Its "drying out" qualities are especially beneficial in lesions where the skin is involved (on wounds, ulcers, etc.).

Dermatal does not excite the parts to which it is applied, and has no toxic qualities as other bismuth preparations.

For internal use, dermatol may be given in as large as grm. 2.0 (30 grs.) doses pro die. Its beneficial action is being claimed in gastric and intestinal diseases, especially those complicated with profuse fetid diarrhoea.—*Wiener Medizinische Presse.*

LOCAL ANÆSTHESIA IN STRANGULATED HERNIA.—Dr. Finkelstein claims that strangulated hernia may be easily reduced by local anæsthesia. His method is the following:

Place the patient on his back, with knees flexed on his abdomen. After diagnosing the strangulated hernia, pour, every fifteen minutes, a tablespoonful of sulphuric ether on the hernia until the hernia returns of its own accord suddenly into its normal position or the swelling is visibly diminished, when, by a little manipulation of the hernia, it will return into its normal position. To protect the adjacent parts, such as the genital organs, from the intense cold and burning caused by the ether, cover them with olive oil and cotton or flannel.

—*Berliner Klinische Wochenschrift.*

EUPHORIN.—Euphorin (phenylurethan), which has been introduced by Sansoni, is claimed by Dr. Adler (Pesth) to be of greater action as an antithermic, antiseptic, antirheumatic, and analgesic than antipyrine, phenacetine, salicylate of sodium, and other remedies of this class. It is only sparingly soluble in water, but freely soluble in alcohol and all solutions containing alcohol. It leaves the pulse and respiration normal, does not cause nausea or vomiting, but causes generally increased diaphoresis.

In Prof. Stiller's clinic (Department for Internal Diseases in Pesth) euphorin was used in twenty-four cases, viz.: in three cases of supra-orbital neuralgia; one case of chronic nervous headache; three cases of ischias; three cases of acute polyarthritis; nine cases of chronic articular rheumatism; three cases of muscular rheumatism, and two cases of cephalalgia after Koch's injections.

The beneficial action of this drug was in all cases self-evident and prompt. All cases of neuralgia, ischias, and muscular rheumatism recovered completely. Two cases of acute polyarthritis also recovered, while the other cases were very much improved. Doses of gr. iii. were insufficient, but gr. vi. doses, 3-5 daily, acted very good.

—*Wiener Medizinische Wochenschrift.*

THE EARLY RECOGNITION OF DISEASED BONE.—I wish to call attention to the necessity for a careful examination and an early recognition of diseased bone. Inflammatory changes begin so insiduously, in many cases, that it is difficult early to ascertain the true nature of the trouble. But in other cases the symptoms are so significant that only the most ignorant can be excused for a failure to recognize the involvement of bone tissue. The young are especially liable to these osteal inflammations; and we should look carefully to this in any exposed bones, notably shin and lower jaw. The shin is particularly interesting. It requires a very slight blow in a young person of a scrofulous diathesis to produce a periostitis, and unless this is promptly and properly treated pus will form and dissect up the periosteum, ostitis will follow, and the bone will be irretrievably damaged. But all this may be averted by an incision sufficiently free to permit the escape of the burrowing pus, but,

unfortunately, this condition is frequently mistaken for rheumatism, for "growing pains," or something else equally misleading, and the patient is temporized with or subjected to a course of treatment that utterly fails to avert the impending injury to the bone. When we see this occurring frequently it behooves us to warn the general practitioner (rather than the surgeon) to seek advice when in doubt.—Johnston, in *Practice*.

GONORRHOEAL INFECTION OF THE ORAL CAVITY IN NEW-BORN CHILDREN.—Dr. Rosinski reports two very interesting cases of gonorrhoeal infection of the oral cavity in new-born babies.

CASE I.—The child was born on the street while the mother was on the way to the dispensary. As soon as admitted, the child's eyes were cleaned with a 2 per cent. silver solution. Still, after five days, the child developed gonorrhoeal blennorrhoea, as proved by the presence of gonococci in the flow. The mother also showed symptoms of gonorrhoea. Three days after the development of the conjunctivitis in the child, Rosinski noticed a peculiar covering in the child's mouth (on the tongue, gums, and hard palate), with superficial infiltration of the mucous membrane.

Drs. Dohrn, Caspary, and Frankel diagnosed it as gonorrhoeal in its character after finding gonococci in the secretion.

The child was cured in three weeks.

CASE II.—A child, thirteen days old, was brought in the same dispensary, while Case I was under treatment, showing the same affection of the mouth. Its mother had also gonorrhoea.

Dr. Rosinski claims these to be the only two cases of the kind on record, and that some authorities claimed that such an infection of the mucous membrane of the mouth is impossible, owing to the peculiarity of its epithelium.

—*Deutsche Medizinische Wochenschrift*.

A CASE OF POISONING BY CALOMEL.—A woman suffering from angina simplex remained constipated for three days. Enemas and other remedies refused to act, and finally 6 grs. of calomel were prescribed; 3 grs. to be taken at once, 1½ grs. after two hours, and the rest after one and a half hours. At the same time a sour diet was forbidden, to prevent the action of acids on calomel. After taking 4½ grs. of calomel the patient complained of intense abdominal pains and great thirst. Soon diarrhoea and vomiting commenced. The stools were watery and bloody. Evening temperature was 38.5°, pulse 110, small and soft. The next evening the temperature rose to 40.0°, while the violent diarrhoea, with tenesmus, continued. Coated tongue, swollen gums, and sensitive, swollen abdomen were the next signs apparent. During the night the patient appeared to collapse. The following day the gums were reddish and partially covered with a gray deposit, the swelling still continuing; the submaxillary glands were enlarged and painful. The lower part of the abdomen showed dullness on percussion. The incisors were loose, and on the mucous membrane of the cheek a deep ulcer surrounded by erosions was visible. Temperature 39.8°. On the next day the diarrhoea ceased, the nausea and abdominal pains lessened. The patient then began to improve, leaving her bed on the tenth day, fully recovered four days later. The treatment consisted of ice-water and milk, followed by hourly doses of laudanum internally, and frequent mouth washes of hypermanganate of sodium, with painting of equal

parts of tinct. rhatany and tincts. of gall. The calomel was examined and found to be perfectly pure, especially the absence of sublimate was proved.

—Pollack, in *Therap. Monatsheft*.

A CASE OF EPITHELIOMA, INVOLVING THE CERVIX NEARLY AS HIGH AS THE VAGINAL INSERTION.—The lady was married, thirty-five years of age, had never been pregnant. She was said to have leucorrhoea. She showed the typical complexion of the disease which a moment's digital examination verified. The womb was freely movable. I decided to remove without delay all the diseased portion of the womb. This I did with the scissors, dividing many of the branches of the uterine arteries, which of course gave profuse hemorrhage. I am certain that I removed or destroyed nearly all that part of the organ below the internal os. As soon as convenient I cauterized the wounded surface thoroughly with the thermo cautery. It healed kindly and the lady soon became clear in complexion, fat and rosy. Last summer, two and one-half years after the operation, her husband called to inform me that his wife would probably be confined in a couple of months, and solicited my services on that occasion. She is still in fine health, three years and four months after the removal of the malignant growth.

—Fulton, *K. C. Med. Record*.

THE "STERNAL SYMPTOM" IN BREAST CARCINOMA.—Under the above title in *The Lancet* of March 7 and 14 last, was described a painless and slowly progressive prominence of the sternum between the second costo sternal articulations, consecutive to carcinoma of the female breast. This is a common physical sign of latent marrow deposit; it is most conspicuous in broad-chested women; after an operation is often the sole objective indication of malignant disease; and, in the end, is invariably followed by other symptoms of "recurrence." It is of considerable practical value as showing that no complete immunity can be hoped for after removal of the affected organ. It is found where there can be no suspicion of any direct infiltration; it rarely gives rise to an actual tumor-formation. The following, however, is one of those exceptional cases in which a distinct new growth eventually appeared at this particular spot after a long interval of seemingly entire freedom from the cancerous malady.

Mrs. —, of Cambridge, seen in consultation with Mr. T. Lucas, had her left breast excised for scirrhus by a very eminent surgeon in 1884. She remained well to all outward appearance till May, 1890, when a prominent tumor grew from the sternum at the situation here indicated. This quickly ulcerated. In November last a round, sloughy sore, three inches in diameter, with livid border and elevated edges, occupied a large part of the bone. The former site of the left breast was occupied by a perfectly healthy scar; there had been no reappearance in the soft parts of the chest wall. The left axilla contained a lymph gland slightly enlarged; this deposit was apparently secondary to the sternal new growth. There were also signs of extensive visceral deposit; "rheumatic" pains in the loins and other indications of marrow infection co existed. As the patient had not been under the continuous observation of her present medical attendant, it was not possible to ascertain whether any undue prominence of the sternum had been present before the development of the tumor. There can be little doubt, however, that this would have been found if sought for.

—Herbert Snow, in *The Lancet*.

ACETONURIA AND DIGESTION.—1. The presence of acetonuria may be found from different forms of disturbed digestion whose presence has become so phenomenally connected with digestive irregularities that the pathological form of acetonuria has almost assumed a connective terminology of indigestive acetonuria.

2. In cases of digestive disturbance separation of diacetoneuria from acetonuria is not distinguishable, and the distinction of the clinical symptoms of this process was only observed in one case where an exceptionally small quantity was present; in very severe cases a combination or alternation of acetoneuria and diacetoneuria is the rule.

3. The earlier actions of acetic acid are more of an oxydizing character of symptoms, and apparently different poisonous forms of the nascent forms.

4. Albuminuria was not found in connection with the acetous or acetic acid combination.

5. He has found acetone as frequently in the contents of the stomach as in the contents of the bowel (excrements); in several cases a greater quantity was found in the former than the latter.

There is a notable difference between the primary morbid disease of the stomach and the secondary diseases, which are mostly nervous. In the former the contents of the stomach usually contained acetone, whereas, in the latter case it is rarely found. In two cases of uræmic vomiting, and in another with gastric symptoms of hysteria, acetone and acetic acid were followed in the urine by oxybutyric acid.

—Lorenz, *Med. Press and Circ.*

ETHER ADMINISTRATION.—I think that theoretical considerations, together with clinical experience, justify me in making the following statements:

1. The prone and the latero-prone positions interfere materially with chest expansion, and are hence liable to bring about a condition of partial asphyxia.

2. In these positions ether should be used in preference to chloroform if there is nothing in the nature of the operation or in the general condition of the patient to contra-indicate it.

3. If it is necessary to use chloroform, full narcosis should be induced in the supine position, and the patient then allowed to come back to a lighter stage, and kept there during the time that he is in the constrained position.

4. On the first warning of respiratory failure the patient should be moved at once into the supine position until breathing is again satisfactory; the operation may then be safely completed in the latero-supine position.

5. A possible retrogression of narcosis should always be borne in mind, and if the operation be one involving sensitive parts or otherwise liable to set up reflex spasm and mechanical respiratory obstruction it will be well, as a precautionary measure, to insert a small prop between the teeth, so that, if necessary, a gag may be introduced and the mouth widely opened without unnecessary delay.

6. In the latero-prone position the arm and shoulder which are uppermost should, as a rule, be supported throughout the entire operation.

7. In every case particular care should be taken that all constricting articles of clothing are loosened or removed.—Sheppard, *Brit. Med. Jour.*

CONTRACTION OF FINGERS.—The main conclusions arrived at may be stated as follows:

1. There are two forms of disease comprised under the name "contraction of the palmar fascia," the one

traumatic in origin, dependent upon common inflammatory changes in the integumental and fascial structures, and occurring at all ages; the other unassociated with obvious traumatism, tending to multiplicity of lesion, and almost confined to middle and advanced life.

2. The latter condition, true "Dupuytren's contraction," is not, strictly speaking, a contraction of the palmar fascia, but consists of a chronic inflammatory hyperplasia, commencing in the subcutaneous connective tissue and involving secondarily the palmar fasciæ and the deep fibres of the corium. The morbid bands are for the most part formed at the expense of the normal tissues.

3. It does not appear to be connected primarily with pressure or friction of the palm by tools or other objects employed in manual occupations, but is probably caused by a specific infective agent which affects its entrance through epidermic lesions made by the finger-nails or otherwise.

4. It is almost essentially a disease of middle and advanced age, more common in men than in women, occurring in all classes, tending to progress slowly through a long course of years, and to return after operation.

5. It is connected with a special diathesis, inherited or acquired, which cannot yet be expressed in any known terms; but neither gout, rheumatism, rheumatoid arthritis, nor any other of the ordinary constitutional ailments has been shown to have any causative relation to the disease.

6. It appears to be almost, if not quite, unknown in certain parts of the East, as in India and Japan.

—Anderson, in *The Lancet*.

NYSTAGMUS IN A COMPOSITOR.—At the July meeting of the Ophthalmological Society of the United Kingdom, Mr. Snell (Sheffield) brought forward this case. The patient, aged 21, had just completed his apprenticeship, and was engaged on the staff of a large daily paper. He came under observation on October 17, 1890. His work for some months had been heavier than usual, the hours from 7 P.M. to 3 A.M. Two days before coming to Mr. Snell he returned home from work, went to bed, rose as usual at 12 (noon). Then he noticed objects moving up and down, with some giddiness; no pain in head nor sickness. The nystagmus was found to be vertical, and the movements were rather jumping; there was quivering of eyelids. He was carefully examined for any central or other lesion, with negative results. The absence of any assignable cause and the resemblance in some particulars to miners' nystagmus suggested inquiry as to the way his work was performed. He was visited at the printing office, which was of course well lighted, and it was found that when he looked up to his "copy," instead of raising head and eyes together, he elevated the eyes only. This was fully described. Any one trying it would find out how tiring it was. Other men at work raised the head with the eyes. The patient gradually recovered, oscillations disappeared, and he returned to work on December 30. He now worked with comfort, having adopted the suggestion as to raising his head at the same time that he looked up from the type to the "copy." Quite recently he had developed "compositor's cramp" in the right hand, and was incapacitated thereby from doing his work. Mr. Snell alluded to his views as to miners' nystagmus having for its prime cause the constrained position in which coal-getters worked. He mentioned instances occurring in men (not practical colliers) working at

the pit bottom in good light, whose gaze was constantly turned up as the cage ascended and descended. Nystagmus, Mr. Snell thought, would probably be found associated with other occupations occasionally. Writers' cramp had been followed by the recognition of many similar conditions. The mention of this compositor's case would perhaps lead others to recognize more the connection of nystagmus with occupation.

—*Brit. Med. Jour.*

REPAIR OF FEMALE PERINEUM.—At the British Gynæcological Society, Thursday, June 11, 1891, Mr. Lawson Tait read a paper on this subject. The serious proportion of failures, and the pain caused by the quilled sutures, led him in 1872 to attempt an improvement on the old method of operating by denudation (in a case operated on three times previously unsuccessfully) by displacing the anterior limbs of the rectal crescent backward and inward, and the posterior limbs of the vaginal crescent forward and inward. He had placed the crescentic edge of the septum on the stretch by pulling asunder the marginal folds of the nates, when he noticed that there was a very distinct white line indicating the union of the margins of the original tear. This white line ran along the whole of the crescentic curve of the new edge of the septum, and ended by being joined by two well-marked white lines not quite at right angles to the main line, but touching it like the sides of an isosceles triangle, whose apex would be situated a little distance in front of the public arch; the white line was never absent where the perineum had been torn to any extent. A careful study, based on new dissection, led Mr. Tait to the conclusion that the white line was the cicatrix of a tear originally antero-posterior in position, but which had become lateral from the traction of the muscular fibers of the levator ani and perineal muscles. Acting on the idea of a restitution in the position of parts, the author deduced the details of the operation, which were laid before the Society in June, 1887. When there was no interference with the function of the sphincter the essential elements of the perineum were either not dissevered or not so separated as to lead to the necessity for the major operation. All such cases he called "damaged" as contra-distinguished from "torn" perineum, for the same effects might be produced by mere stretching, the result of a vaginocèle or uterine protrusion in cases where no labor had ever resulted. This damage of the perineum, even when due to mere stretching, might result in its almost total disappearance up to the outside of the ring of the sphincter. It required a minor operation for its treatment, to which he gave the name of "extension of the perineum," a proceeding of great value in many different conditions. There were also exceptional cases of "torn perineum," with many of its inconveniences, where the sphincter was not even damaged. Cases were therefore divided into those of "torn" and "damaged" perineum, and to them were applicable severally the operations for "complete repair" and "extension" of the perineum. The principles involved were three—(1) the principle of flap-splitting; (2) the disinterment of divided structures, which was required only for cases of repair of complete rupture; (3) the method of insertion of the sutures, which was common to both. The principle of flap-splitting was clearly the invention of Dr. Maurice Colles, of Dublin, who invented and adopted it for cases of vesico-vaginal fistula. Mr. Tait then described in detail the operation for the repair of a completely torn perineum, and

gave a demonstration of the principles and method of operating upon a specially constructed model.

—*Brit. Med. Jour.*

GERMICIDES AND ANTISEPTICS.—The chief source of error in the use of these agents seems to lie in a confusion of two very different actions, namely, the germicidal and the antiseptic, that is, on the one hand the total destruction of the germs, and on the other the prevention of their development. With many of the substances used it is simply a question of the strength of solutions whether the effect produced is to be germicidal or antiseptic. This is notably the case with those agents chiefly used for surgical and obstetrical purposes, namely, carbolic acid and the bichloride of mercury; carbolic acid cannot be relied upon to destroy germs in a solution of less strength than 5 per cent., and this must be an aqueous solution, since oil or alcohol used as a menstruum greatly weakens the power of the acid; but a 2 per cent. solution is sufficient to check the development even of anthrax spores, the most tenacious of life of any form of germ known; the bichloride is germicide in solutions of 1-1,000, and antiseptic in the proportion of 1-14,000.

It is at once apparent that it is useless to use a solution of merely antiseptic strength in cases where a germicidal action is needed. For instance, for all purposes of disinfection it is folly to use a mere antiseptic, except with the clear understanding that nothing more is done than to render the germs temporarily inactive. In the disinfection of poisonous discharges, as for instance the stools of typhoid, no solution should be used whose germicidal strength is less than that of the bichloride of mercury in the proportion of 1-1,000. Even this should not be considered as a radical means of destroying the infective quality of the discharge, since only those germs that came directly into contact with the disinfectant would be affected by it; it should always be borne in mind that no solution can be depended upon to disinfect solid matter, and that destruction by burning is the only certain means. Even semi-fluid matter, such as fresh tuberculous sputum, resists the action of a 1-1,000 solution of the bichloride to such a degree that after twenty-four hours' exposure to the disinfectant it easily conveys tuberculosis to inoculated animals.—*N. W. Lancet.*

POISONING WITH CHLORATE OF POTASSIUM.—Dr. Läderer reports the case of a shoemaker, aged eighteen years, who died from the toxic effects of this widely-used drug. Patient came to hospital complaining of tonsillitis, for which he got a gargle of 30.0 grms. dissolved in a glass of warm water. He swallowed the whole within half an hour in two drinks. The first symptoms of the drug were weariness, thirst, giddiness, followed rapidly by more alarming symptoms, arising, presumably, from the action of the salt on the blood: acute anæmia, dyspnoea, cyanosis, persistent vomiting of a greenish fluid, pain in the hypochondria and around the umbilicus, with icterus. After this liver, spleen, and renal symptoms set in. During seven days' illness the urine eliminated did not exceed 100 c.c. (= 1543.2 grs. = 6.1 cubic inch, or 3½ ounces nearly). By means of the indo-sulphuric acid test not a trace of potass chloratis could be found. The dark-brown sediment of the urine cleared up next day. Albumen was present from beginning to end. From third day epithelial cylinders were sparingly present, while the methæmoglobin cylinders were found in

great numbers from the very first day, and disappeared gradually with the clearing of the urine. The spectroscopic examination of the filtered urine gave the methæmoglobin spectrum. Luderer considers:

1. That the poison is simply the action of the drug, and produces changes in the physiological condition of the blood.

2. Acute nephritis is not necessarily present in all cases; but where the illness is protracted it is seldom absent, owing to the mechanical irritation of the renal epithelium.

3. The constant presence of icterus is partly due as a policholic origin, and partly as hæmatogenous.

4. The vomiting, constipation, etc., are probably due to the fine peptic ulcers, produced by capillary emboli, formed by the methæmoglobin clots.

5. Cyanosis is due to the insufficient arterializing of the blood in the lung.

6. The waste material of the blood is found to be identical with that found in the renal canals from urine analysis, probably having passed thither by diapedesis.

7. The best treatment in such cases within the first twenty-four hours after swallowing the salt would be venesection, followed by infusions of sodium chloride; or, better still, transfusions of defibrinated blood.

8. Internally potassium chlorate should not be used, more especially in children.

The quantity of the drug should be carefully limited in gargles, so that small doses may be taken in cases of accident.

Wohlgemuth reported another case of intoxication from a 2½ per cent. lotion of which the patient had used a tablespoonful every two hours for eight days, for angina, a swelling on one side of the face. The appetite was lost, giddiness, thirst, etc., were present; urine dark with albumen, but no methæmoglobin. About the sixteenth day small punctiform hemorrhage spots, varying in size, were found over the legs, which soon extended over upper limbs and trunk. Wohlgemuth remarked that a 4 or 5 per cent. lotion is usually prescribed in adults without any untoward effects, but in this case he thinks the disturbed digestion and loss of appetite was the chief factor of the poisonous absorption. He advises this drug not to be administered on an empty stomach, nor long continued without examining the urine for methæmoglobin, by which the dose should be guided.—*Med. Press.*

CASE OF PERSISTENT CHLOROFORM INTOXICATION WITH CURIOUS NERVOUS SYMPTOMS.—The patient is a gentleman, aged thirty-six, married, slightly built, very fair, small head, and his look and appearance give one the idea of a somewhat "weak-minded man."

His mother and father are both alive and well, the mother's brother died paralyzed. One of his own brothers has attacks of an epileptic nature, and another brother drinks heavily.

In July, 1888, I operated on him for a poisoned wound of the hand, and again in January, 1889, when I tapped an encysted hydrocele for him. Chloroform was used in the first, and ether in the second operation, and he took chloroform better than ether, and came more quickly under its influence. In June, 1889, he lost his only child very suddenly, and this was a very great shock to him and to his wife. Soon after I had occasion to order his wife sulphonal in 15-grain powders for a night or two, giving him the prescription. They then went to Harrogate for a month,

and whilst there, from letters I learned that he nearly killed himself by taking these powders himself in large quantities. In August, 1889, he assured me that he had quite stopped taking the sulphonal; but he was in an extremely shaking condition, everything pointed to commencing "*general paralysis*."

His *symptoms* were:

1. A change in the voice, speech was very thick, deliberate, and hesitating.

2. A loss of control over the tongue; he was quite unable to put it in and out quickly.

3. The lips could only be opened and shut slowly, and with apparent difficulty.

4. Knee-jerks were exaggerated.

5. Abdominal and cremasteric reflexes not present.

6. Gait unsteady and uncertain; he swayed when standing with his feet together and his eyes shut.

7. Sight was impaired; the left disc was blurred.

8. Memory was very bad.

9. Temper most irritable.

10. Lost flesh.

11. Very constipated, with occipital headache.

12. Sleep was bad.

13. Handwriting shaky, but is now better than a month ago, when it was quite illegible.

14. There was no loss of control over bladder or rectum, his sexual powers were unimpaired, and he was a great smoker.

These were the symptoms, and feeling assured by himself and his friends that he was not taking any drugs, we came to the conclusion that it was general paralysis setting in, and gave a very gloomy prognosis.

Then came the curious part in the case. Soon after this I found that he was still taking sulphonal in considerable quantities; and also on inquiring at his chemist's I found that for years past he had been in the habit of, on and off, coming in for chloroform. On questioning the patient he at once admitted this, saying it was to produce sleep. He inhaled it from a handkerchief. (I may say that up to this time it was only an occasional half ounce bottle which he used.)

A month after all the above symptoms had improved, he was better in every way. The question arose, Could not all these symptoms be due to the excessive use of sulphonal? I think that this is conclusively proved, as now, in 1891, and at the time when I know the patient cannot have had any drugs at all for over two months, he is very much better in every way.

The full history of the case is that in January and February, 1890, he took to drinking, and was more or less drunk most of those two months, and then I heard that he had once before had an outbreak of the same character. From February to September, 1890, he settled down, and improved very much in health, but in September, 1890, business worries were made an excuse of for taking chloroform, and this time in very considerable quantities, till, on October 20, 1890, he was brought home in a cab insensible, and smelling of chloroform, and in his pocket were found six or eight bottles, varying in size from 1½ ounces to 4 ounces, all labeled chloroform, but empty. When I saw him he had come round, but was in a most pitiable condition, frantic for more chloroform, and directly he saw me he implored me to give him some more, offering me everything he was possessed of for even half an ounce. We then got in a male nurse and had him watched. On searching the house we found over thirty bottles, all labeled chloroform, dispensed by a dozen or so

different Liverpool chemists, and varying in size from 1½ to 2 ounces.

He was watched from October 20, to the beginning of December, 1890, and during that time got neither drugs nor drink, and improved very much in health.

A week before Christmas he got rid of his keeper and re-commenced taking chloroform. As leading up to the future history, I will say that he took no drink during this period; this I have on the evidence of his friend, etc., who always knew when he was drinking, together with his own statement that he was taking nothing but chloroform. He went on taking chloroform in large quantities day and night from a week before Christmas till New Year's day, 1891.

On the night of December 31, he went to bed with a hot-water bottle in the bed, took chloroform, and woke up to find himself in great pain, and on looking at the feet found they were very much burnt. The bottle was a metal one only thinly covered with flannel.

He was in awful pain, and in a very nervous, excited condition, but perfectly rational. I punctured the blisters, which were so tense that the fluid came out in a jet over the end of the bed, and dressed the wounds. The patient did well for just a week, seemed better himself, and beyond being extremely irritable, and not sleeping well, seemed to be doing fairly. Of course, all chloroform, etc., was stopped, and he was watched. The wounds on the feet all this time were quite healthy and sweet, there was no cedema or redness, they were dressed antiseptically. When suddenly, on January 6, six days from the accident, there started symptoms of delirium. This developed into a typical attack of delirium tremens; he had the dry furred tongue, quick pulse, great restlessness and agitation, and in addition the delirium. His chief delusion was that certain wires came up through the bed with pincers and tore at his feet. He had all the valancies removed from the bed, so that he could look underneath and catch them, and had been supplied with a large stick to reach under the bed to hit them. He would sit up in bed in his night shirt, with nothing over him but an eider down, watching the spot where his feet were. After a minute or two of absolute stillness, he would suddenly dash the eider down off, and clutch at the bed round his feet, and then exclaim, "Damn them, they are too cute; I can't catch them." Besides this he saw all manner of people and things about the room, and conversed with them; and at other times cursed, swore, and blasphemed in an awful manner.

The feet all this time were doing well: this condition lasted five days, and he then quickly recovered, and has done well since.

Another curious point was that when he had recovered he remembered all his delusions, and would laugh over them.

Under these circumstances, one is led to the conclusion that this must have been an attack of delirium tremens following the excessive use of chloroform. I feel quite sure that for two and a half months preceding the attack he had no drink at all; then again, the wounds of the feet were all along perfectly healthy, and no symptoms of septicæmia or blood poisoning of any kind; whilst, finally, we know that for some weeks before he had been more or less under the influence of chloroform night and day, taking ounces in the twenty-four hours.

—Holland, *Med. Press*.

Medical News and Miscellany.

GORDON pronounces orexin a valuable stimulant in the anorexia of tubercular affections.

DR. GEORGE DE SCHWEINITZ has been elected Professor of Ophthalmology at the Philadelphia Polyclinic.

THE peaceful brotherhood in St. Louis is all torn up over an outbreak of hostilities between the *Medical Mirror* and the *Medical Review*.

DURING June the mortality in Chattanooga, Tenn., was 73; representing an annual death rate of 29.20. In Nashville the rate was 26.25; Memphis, 25.20; and Knoxville, 21.96.

A REMARKABLE case of early precocity has been made public in Philadelphia, where a girl of sixteen gave birth to a child whose father at the time of conception was only thirteen years old.

ON June 14, a bronze bust of the celebrated dermatologist, the late Ferdinand Von Hebra, was unveiled in the Arcade court of the Vienna University. Prof. Kaposi, the deceased's son-in-law and successor, spoke in honor of the occasion.

THE Kentucky State Board of Health has resolved to make a list of medical colleges whose diplomas are to be endorsed for registration, including those colleges only that in the future exact a matriculative examination and a three years' graded course.

FOLLOWING the suggestion of Dr. Verincourt, of the department of agriculture in Russia, a large number of farmers have put their cattle in blue spectacles to protect their eyes against the terrible light of the snowy steppes. About four thousand pairs of the blue spectacles are thus actually in use.

IN Toronto the newly appointed medical officer is stirring up the dry bones of the authorities and inaugurating some useful reforms. He has been investigating the milk supply of the city, and has found a much worse state of affairs than has been suspected. It is stated that there are cases where milk is sent to the city from cows in the last stage of tuberculosis.

—*Maritime Med. News*.

FOR the second year in succession a young lady (Miss Hester Russell this year) has taken the highest place in the final examination for the M. B. degree of the Royal University of Ireland. Both these distinguished students were educated at the London School of Medicine for Women. Miss Philippa Fawcett has maintained her position in this year's tripos, being declared equal to the senior wrangler. Miss Elsie Windsor, who has come out first of her year in the mathematical tripos, is also tennis champion at Newham.

GRATITUDE FOR MEDICAL SERVICES.—For the successful treatment of his wife in a dangerous surgical operation, performed by Dr. Michelsen, of Wiesbaden, Herr von Donner, a merchant of Hamburg, has placed at the disposal of the authorities in this town, as a thank-offering, the sum of two million marks. This money is to be expended in the erection of a hospital in Hamburg, in which Dr. Michelsen is to be installed as chief physician. The building will take two years to complete, and at the expiration of that period Dr. Michelsen will leave the hospital at Wiesbaden for the medical establishment in Hamburg.

OHIO shines with the effulgence reflected from her numerous Presidential sons, and also from her lights in the medical profession. To show what capacity is inherent in the Ohio doctor, it is stated that one alone conducts a complete medical college, he filling all the chairs, lecture- and demonstratorships, from dean to janitor. And yet he is not much of a doctor for Ohio, having a bias towards irregularity.

THE death-rate in St. Louis for June was 21.91. During the month there were 840 deaths, including 145 from diarrhoea in children under five years of age; 70 from phthisis; 47 from convulsions; 42 from inanition; 38 from marasmus; 36 from pneumonia; 33 from heart disease; 32 from old age; 31 each from bronchitis, Bright's disease, and accidents; 20 from cancer; 11 each from diphtheria, whooping-cough, and typhoid fever; 17 from malarial fever.

DR. E. G. DOMANSKY, of the firm of Drs. Leininger & Domansky, 1056 Milwaukee avenue, was the victim of an assault at the corner of Washington and Clark streets. The physician, accompanied by his wife, was on his way to the Chicago opera house. When they arrived at the corner the doctor claims that a stranger approached him, and accosted his wife in most indecent language. He resented the insult, whereupon the stranger struck him a violent blow in the face. A crowd gathered and the assailant was arrested.—*Chicago Daily News.*

MEDICO-CHIRURGICAL COLLEGE.—The following changes have been made in the faculty: Dr. G. E. Stubbs, Emeritus Professor of Clinical Surgery; Dr. W. S. Stewart, Emeritus Professor of Obstetrics and Clinical Diseases of Women; Dr. H. E. Goodman, Honorary Professor of Surgery, Clinical Surgery and Orthopaedics; Dr. J. M. Anders, Professor of Principles and Practice of Medicine, Clinical Medicine and Hygiene; Dr. E. E. Montgomery, Professor of Obstetrics and Gynecology; Dr. Ernest Laplace, Professor of Surgery, Pathology and Clinical Surgery.

MILITARY ORDER OF SURGEONS OF NEW JERSEY.—At the regular meeting of the Military Order of Surgeons of New Jersey held June 15, the following officers were elected: President, Lieutenant-Colonel A. K. Baldwin, Surgeon, First Brigade; First Vice-President, Lieutenant-Colonel F. Gauntt, Surgeon, Second Brigade; Second Vice-President, Colonel Geo. W. Terriber, Division Surgeon; Secretary, Major E. L. B. Godfrey, Sixth Regiment; Treasurer, Major H. C. H. Herald, Fifth Regiment. The following were elected honorary members of the Order: Surgeon, General Jos. D. Bryan, N. Y.; Surgeon, General Nicholas Seem, Wis.; Major Alfred A. Woodhull, Surgeon, U. S. A.; Major John H. Janeway, Surgeon, U. S. A.

DOMESTIC MEDICINE IN NOVA SCOTIA.—Asexamples: Called to see a boy with an injured instep and found it enveloped with a foul *quid* of tobacco and commencing erysipelas. Again, called to see a young woman who had pain in the back from natural causes, which were thoroughly understood by patient and attendants, and for which my services were requested. On entering the house there was an unsavory odor, and on introducing my hand it entered a huge *cataplasma stercoris bovis* extending from the shoulders to the hips. On protesting against this form of poultice—the protest elicited sorrow for my ignorance. At another case treatment was varied by the use of a *cataplasma stercoris humani* which, like the previous prescription, had to be fresh and warm that their virtues might be obtained in full.

At another time the writer was indoctrinated into the virtues of *pilula agnorum* when collected from the field at the proper time.—*Maritime Med. News.*

SHAMEFUL NEGLECT.—Microscopy and chemistry have convincingly demonstrated that the waters of Lake Michigan in their natural state are among the purest waters in the world. Nevertheless, Chicago, located upon the shores of Lake Michigan, is just now so much in need of pure water that capitalists are preparing to invest \$1,000,000 in piping water from a Wisconsin spring to be sold in this city.

That this should be so is an indictment against somebody. There has been shameful neglect somewhere or such a condition of things could not arise.

That this condition continues and promises to continue with so much certainty that capitalists can afford to make investments based upon its continuance is a startling fact.

Where is the drainage board led by the delusive Dick Prendergast? That board was created and is maintained in order to give Chicago pure water. And yet capitalists are so confident that nothing will be done by the board that they are making investments upon the theory that the board will not interfere with their plans. —*Chicago Daily News.*

WEEKLY Report of Interments in Philadelphia, from July 18 to July 25, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess.....	1	2		Hernia.....	1		
Anemia.....	1			Homicide.....	1		
Aneurism of the aorta.....	1			Inanition.....			15
Alcoholism.....	11			Influenza.....			1
Bright's disease.....	10			Inflammation brain.....	2		23
Burns and scalds.....	1	1		" bronchi.....	1		6
Cancer.....	12	1		" kidneys.....	9		1
Casualties.....	5	1		" pharynx.....			1
Congestion of the brain.....	3	10		" lungs.....	11		6
" lungs.....		5		" pericardium.....	2		1
Congestive chill.....		1		" pleura.....	1		
Cholera infantum.....		119		" s. & bowels.....	8		4
Cholera morbus.....	7			Intussusception.....	1		1
Cirrhosis of the liver.....				Marasmus.....			32
Consumption of the lungs.....	49	5		Measles.....			1
" bowels.....				Obstruction of the bowels.....	1		
Convulsions.....	2	22		Old age.....	11		1
Cyanosis.....		5		Pemphigus.....			
Debility.....		4		Paralysis.....	9		
Diabetes.....	4			Softening of the brain.....	2		
Diarrhoea.....	3	1		Stricture.....	1		
Diphtheria.....	12			Suicide.....	3		
Disease of the liver.....	1			Sunstroke.....			1
" heart.....	24	3		Syphilis.....	1		1
" mesenteric glands.....				Tabes Mesenterica.....	1		
Drowned.....	2			Teething.....			2
Dropsy.....	2	4		Tetanus.....			1
Dysentery.....	7			Tumor.....	5		
Fatty degeneration of the heart.....	1			Ulceration of the bowels.....	2		
Fever, puerperal.....	1			" stomach.....	1		
" remittent.....	1			Uræmia.....			6
" scarlet.....		1		Whooping cough.....			
" typhoid.....	5	4		Total.....	235	312	
Hemorrhage.....		1					

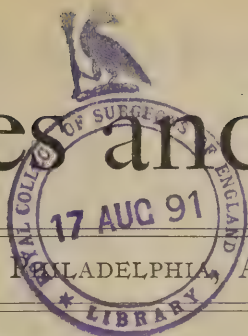
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Original Articles.

INFANTILE PARALYSIS.¹

BY A. VAN HOFF GOSWEILER, A.M., M.D.,
BALTIMORE.

THROUGH improved methods of investigation and advanced knowledge, the location of the lesion in the spinal cord in infantile paralysis has of late years been ascertained—the view that the disease is an “essential” affection of the peripheral nerves or of the muscles is incorrect. This generic name is unfortunate and misleading, for it is not, as the name would imply, the only form of paralysis that occurs in children, and even if it were, it is not confined to the period of infancy, but attacks persons of any age. It is, however, akin to a form of paralysis that is by no means uncommon in adults, to which M. Duchenne *de Boulogne*, of France, has applied the name, progressive muscular atrophy. Neither does the name, infantile spinal paralysis, describe it, as spinal paralysis in children may arise from spinal meningitis, tumors, pressure-myelitis in Pott's disease of the spine, acquired diphtheria, syphilis, or other causes. M. Duchenne recognized it first in 1849, and brought it before the profession in 1853, calling it infantile atrophic paralysis. “If I were to give this disease an anatomical name, I should call it acute paralysis of childhood from fatty atrophy of the anterior spinal cells.” M. Duchenne thus asserts his belief that its origin is spinal, although no post-mortem examinations had been made to confirm it.

It was not until 1830, that J. von Hein first described its clinical features; in 1863, Cornil microscopically observed distinct alterations in the cord;

in 1865, Prévost, Vulpian, Labordé, Erb, Leyden, located, and in 1868, J. Lockhart Clark confirmed, the essential lesion in the anterior horns of gray matter in the cord; but it remained for Charcot and Joffroy in 1870, to point out the degeneration as well as the constancy of the lesions, and not until then can it be said that its pathology began to be understood.

Though infantile paralysis, or poliomyelitis anterior acuta infantilis,—a name proposed by Professor Kussmaul, indeed, preferable in that it describes the pathology of the disease, a true poliomyelitis—is usually an obscure, warm-weather spinal disease, it has been observed coming on suddenly, but seldom after the age of four years. According to Gowers, of all cases under ten years, three-fifths occur in the first two years of life, and, he says, there is little doubt that a considerable number of cases are congenital.

Dr. T. G. Morton, *Philadelphia Medical News*, July 12, 1890, believes that most cases of congenital club-foot are the result of an intra-uterine paralysis, for in all palsied muscles were found. One of M. Duchenne's cases was affected twelve days after birth; Bramwell's in three weeks; Wharton Sinkler's 345 cases in the Philadelphia Infirmary for Nervous Diseases, lately published in statistical form, 135 below two years, and 56 under one.

It is claimed that the paralysis in typical cases is ushered in with fever and restlessness. Charcot regards the fever as the usual precursor, and most of the text-books follow his example; but in the cases I have seen, I have failed to obtain any history of high temperature. West lays little stress on the initial fever, making it rather the exception than the rule.

Apart from the febrile initial stage and the sudden onset of paralysis, it occurs to the discriminative diagnostician that the uniformity of the lesion in cervical and lumbar enlargements of the spinal cord,

¹ Read before the Medical and Surgical Society of Baltimore, June 11, 1891.

the invariable immunity of the sensory functions and of the visceral sphincters, the rapid disappearance of the reactions of the muscles to the faradic electric current, the early atrophy, the fall of temperature, finally, the deformity,—that all these phenomena are found combined in no other disease. In fact, it cannot be denied that peripheral paralysis of single limb—of one arm or leg—may resemble in its clinical characters the centric affection which we are considering. However, the absence of anæsthesia, of a characteristic decubitus, of paralysis of the sphincters, distinguish it from acute, central, transverse myelitis, multiple neuritis or diphtheritic paralysis. From the effects of injuries, especially from stretching or compression of a nerve-trunk and congenital dislocation of the shoulder-joint, we learn in the matter of differential diagnosis, that paralysis may arise and be accompanied after a short time, by atrophy of the muscles and loss of their reactions to faradic electricity, just as in certain cases, reported by Charcot, of peripheral paralysis of the facial nerve.

Statistics inform us that in more than half the cases the lower limbs are affected; of the remainder, the majority represent implications of the arms, notably the deltoid muscles (palsy of Erb), and legs, or, perhaps, arm and leg, and very seldom the upper extremity alone.

All investigators assign some cause, such as teething, cold or damp, injuries to the spine, measles, scarlatina, malarial or other fever, convulsions or concussion; but when such a variety of wholly different causes are assigned, which possess no feature in common, we are warranted in thinking they are merely concomitants or accidents. Paralysis in infants following a chill, when the body is heated, gives rise to suspicion of poliomyelitis anterior. Heredity has, perhaps, a distinct influence in the production of the disease, but it is only after a popular mode of expression that we can consider it as a cause. At the Fourth Congress of Russian physicians, recently held, Dr. Rot made a communication, declaring that heredity is the only etiological factor that has been proven, "the primary cause of the affection must be sought for in the modifications of that part of the fecundated ovum, which enters into the formation of the nervous system." Gowers and Buzzard seem quite paradoxical, if not right, in their statements, the one being strongly impressed with its heredity; the other believing that "it is more common than not, for the disease to attack fine, grown, hearty children, for neuropathic heredity generally does not materially impress itself in an apparent manner upon the nutrition or growth of infantile life." During the period of dentition, children are liable to disorders of the cerebro-spinal system, and, as from apparently slight causes, we find convulsions the cause of the death of numberless infants, seemingly robust; so we see in this affection, as little cause producing paralysis.

Of course, we have loss of heat and atrophy in the muscles of the affected limbs; but what is the cause of the atrophy? Is it due merely to their not being called into action? or is the atrophy a feature of the disease as the paralysis and dependent upon the morbid changes in the nerve-centres? The latter seems most probable, as we observe the atrophy extends to the bony system, the nutrition of which is involved. Evidently, this atrophic degeneration, if not inherent, is a real sequence of inflammatory process in the cord. This suggests the question of the utility of topical remedies, such as rubbing, muscle-beating, massage, perhaps electricity.

Here, again, in the muscle-lesion, we observe a marked contrast to the order of sequences that obtain in the cognate disease, progressive muscular atrophy, for while in the former, the paralysis always precedes the atrophy; in the latter, the atrophy precedes the paralysis, and determines the amount. If not an anomaly, perhaps a problem for the physician, why the affected limbs in the latter react normally to electrical stimuli, and in the former, galvanic reaction is either wholly or partially lost?

It is a characteristic point that the paralysis almost always reaches its worst at the very beginning, as in the apoplectic paralysis of adults, or in the first twenty-four or forty-eight hours. After that there is a marked improvement. The power of motion is rapidly recovered. After some weeks the paralysis is often confined to a single group of muscles in one arm or leg with persistence; in other cases the symptoms suddenly improve. Occasionally, after a week, some of the muscles contract, but feebly, others not at all, to the faradic electric current. "This is," says Prof. Henoch, of Berlin, "a bad sign, for when the muscles cease to react some weeks after the onset of the disease, they usually remain incapable to reaction to the electric current during the whole of life. The paralysis and atrophy may be very well marked, and yet the limbs scarcely appear shortened, and the growth of the bone may be arrested to considerable extent."

When called in time, we are first to combat the congestion and inflammation, which, manifestly, are the conditions of the gray horns of the spinal cord; hence we have a clue to the therapeutics we should employ. At this early stage we should ignore vigorous faradic stimulation, either peripheral or from center to periphery, for it will exhaust motor excitability; but should adopt, in particularly adapted cases, the mild, galvanic, uninterrupted current, to be sent down through the injured cord, out through the nerves to the flabby muscles. However, when the damaged motor centres can bear later peripheral excitation, the faradic, the induced static, or franklinic interrupted current may be employed. After the eighth day Simon, of Paris, uses a weak galvanic current, applying the positive pole to the shoulder and arm, the negative pole being placed in a basin of water, in which the child's hand rests. The sitting should never last more than eight minutes. The functions of the skin may then be stimulated with salt and sulphur baths. In the early stage Dr. Althaus advises the injection of ergotine, $\frac{1}{4}$ gr., for a child a year old, in order to contract the arterioles of the part, to deplete its blood supply. He stimulates the muscles as they become affected with injections of strychnine. Conium and chloral may be used to calm nervous excitement. Dr. E. C. Seguin recommends counter-irritation over the spine, bromides, and arsenic, while others use cupping, leeches, and iodide of potassium. Brown-Séquard has well encouraged us to employ belladonna, in that it is capable of controlling the inflammatory process in the cord. Prof. Fraser, of Edinburgh, has confirmed this claim. The same indication that calls for rest to the cord indicates abstinence from large doses of strychnine and electricity. If pain or fever are present, use ether spray to the spine, ice, gelsemium, aconite, antipyrine, internally.

All cases do not get well under treatment, but enough recoveries occur to give hope for a bright future for these little ones, when the family physician will either treat them correctly or send them to the neurologist, who will take the necessary and

timely pains with them. General medicine made nervous diseases an opprobrium until neurology grew into an important specialty, and gave hope to thousands, as it has given to these little patients, who are too late and often left to the tender care of modest prophets to grow up, in some instances, needlessly deformed.

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DRUNKENNESS: HOW SOCIETY SHOULD DEAL WITH THE GROWING EVIL.¹

By WARREN F. SPALDING.

Whatever may be true as to the causes of intemperance, and the best methods of removing them, it is plain that drunkenness furnishes a large proportion of the work of police, courts, and prison officials. Sixty-five per cent. of the arrests in Massachusetts and 70 per cent. of the commitments are on account of this crime. About 40 per cent. of all who are confined in our prisons are held on this account, to say nothing of another large percentage of cases in which drinking habits led to other crimes. In these figures no account is taken of any except those who were arrested. The thousands of others as badly intoxicated, who were not taken into custody, are not included. The police ordinarily take cognizance only of those forms of drunkenness which make the individual a public peril or a public nuisance.

What should be done with them when they have become sober? Until recently Massachusetts, like most States, has dealt with them by machinery. So far as there has been any theory underlying their treatment, it has been that drunkards are all substantially alike, and should be dealt with substantially alike. Drunkenness, being an offense against the State, must be punished. The theory is a fairly sound one, though not applicable in all cases. The State should, as far as possible, put the seal of its condemnation upon drunkenness, especially upon those forms of intoxication in public to which reference has been made. The person who is drunk should be made to realize that he is an offender against the State.

But how shall he be punished? Heretofore the rule has been, substantially, that the drunken person shall, when convicted, be required to pay a fine of \$5. If he paid it he was released; if he could not pay it he was committed to prison for thirty days, with the privilege of being released whenever he could pay. This system was fruitful of many evils.

EVILS OF THE OLD SYSTEM.

1. It discriminated between the rich and the poor. The man arrested for drunkenness who had \$5 escaped punishment, while the one who had no money was punished by imprisonment for a month.

2. In a large number of cases the money paid for fines came from the earnings of mothers and wives. Many of them were afraid to refuse to pay these fines. Many others paid because the prisoner was the breadwinner for the family, and a choice must be made between paying \$5 and losing a month's wages. This impoverishment of the families in order to secure exemption from punishment is a very serious evil. It punishes the innocent wives and children, and disheartens all concerned.

3. The fact that the penalty for drunkenness was only a fine, led to a disposition of this class of cases

by wholesale, with very little consideration for the individual peculiarities of each. As the court had no option in the matter except to impose a fine or to release the prisoner, it was useless to take time to try the cases in detail.

4. The system of fines led to uniformity of treatment when there should have been discrimination. It made no difference whether a man came into the dock for the first time or for the fiftieth; whether he was an habitual drunkard or only an occasional offender; whether he was a homeless tramp, living by his wits, or an industrious citizen who usually supported his family; as a rule they were all treated alike. Occasionally the court would place on probation, or discharge with a nominal fine, a prisoner who showed himself deserving of leniency, either by his past record or on account of the needs of his family. Occasionally, also, a complaint would be made for a "third offense" within a year, and a definite sentence to imprisonment would be imposed, but these cases were few.

5. The system favored the habitual drunkard. Men have been sent to "The Island" eleven times in twelve months for non-payment of fine. It is not uncommon to receive a prisoner who has served forty or fifty thirty-day terms, while many others, in better circumstances, had paid scores of fines.

6. It put the brand of criminal upon many who had committed no other offense. The seriousness of this can hardly be measured. When a man who has lived an honest life finds himself standing in the dock side by side with the most dangerous and vilest of the community, and is treated like them, he often loses ambition, reckons himself a criminal, gives up hope of restoration, and becomes a permanent member of the delinquent or dependent class. If the same man were given an opportunity to correct his error without being thrown among the distinctively criminal class, and without being marked as a "prison bird," the chances of reformation would be greatly increased. The shock of a first arrest, even if nothing follows it, is often the means of causing one to see and turn from his folly. The first imprisonment, especially if the prisoner is not a hardened offender, is very likely, by its degrading associations, to confirm him in wrong tendencies.

7. The fining system makes the offense of drunkenness appear a trifling one. The man who has reached the point in his downward career where he is conscious that he may soon be liable to arrest, forms his conception of the enormity of his offense by the penalty imposed. If he can satisfy the State by paying \$5 he will not regard it as a very grave affair. It does not deter him; does not punish him; does not educate him to realize what a serious matter it is to be drunk.

THE NEW SYSTEM.

The new Massachusetts system of dealing with criminal drunkenness aims to remedy many of these evils. It in no way changes the underlying foundation of the old law, that it is a crime to be intoxicated. The person who is found in this condition is to be taken into custody by the police, as before. The new law provides for punishing him, even more severely than the old law. Whoever is convicted of drunkenness may be imprisoned for a term not exceeding one year, in a county or city prison, or the State workhouse, and if sent to a reformatory, may be kept two years. As this is a very severe punishment for a single offense of this kind, it is provided that if the officer in charge of the police station is satisfied that

¹ Read at the International Medical Congress at New York.

the prisoner has not been arrested twice before within a year, he may release him, not absolutely, but pending investigation. The method is simple. The prisoner who desires this leniency makes a written statement, giving his real name and address, and declaring that he has not been arrested for drunkenness twice before within the twelve months next preceding. If the officer believes this statement to be probably true he may release him.

This provision was somewhat misunderstood at first. Many officers supposed that they were obliged to release any prisoner who made a statement. The language of the statute is that he *may* release, and to make it certain that the power is not exercised for the benefit of old offenders, or persons who are unknown, the releasing officer is required to certify in writing his belief that the prisoner's statement is probably true.

To release a prisoner when there is doubt as to the truth of the statement is a gross abuse of power.

NO OBLIGATION TO RELEASE.

Even if the officer believes the prisoner's statement is true, he is under no obligation to release him. A thoroughly bad man may be brought in, arrested for drunkenness for the first time. As general character is to be taken into consideration in imposing a sentence for drunkenness, it should be considered, in deciding whether he shall be released from the station or not. The court should be allowed to pass upon all doubtful cases.

If a prisoner is released, his statement is afterwards investigated, and if found to be false, he must be arrested and tried. If he makes a statement, and is not released, his statement goes to the probation officer, who reports to the judge. If he is satisfied with the report, he may release the prisoner without bringing him into court. If he is complained of (as he must be if he is not released), he may, after conviction, be placed on probation, under the surveillance of a probation officer, or may have his case placed on file if he satisfies the court that he is not an habitual offender.

THE FOUNDATION OF THE SYSTEM.

The theory underlying this part of the system is that, unless a person is otherwise objectionable, the fact that he is arrested for drunkenness twice within a year does not warrant a sentence to imprisonment. There is nothing new in this. No one has ever claimed that all drunken persons should be arrested. Officers have always been allowed to use their discretion. They have passed by many who, in a quiet way, were trying to get home; they have allowed a drunken man's companions to get him there if they could, or have seen the man himself, so drunk he could hardly stand, call a carriage for the purpose. There is not a community of any size which does not have its habitual drunkards, who are constantly intoxicated in public, but are never arrested. So long as these things are tolerated—and no one suggests that existing customs of this kind should be changed—there can be little objection to allowing the police captain to release, under careful restrictions, one who can satisfy him that he has not been arrested twice before within a year. Assuming that drunkenness is a crime, it is still true that it is different from all other offenses. No police officer is allowed to pass by a person whom he has seen committing a petty larceny, or to permit the friends of a burglar to assist him home with his spoils.

THE ADVANTAGES.

Several marked advantages have already been secured. Rich and poor are now treated alike. Those who are sentenced go to prison because they have been drunk, and not because they are poor. Whenever imprisonment is thought to be the proper punishment for drunkenness, it is imposed directly by the court, and does not come indirectly on account of the poverty of the prisoner.

Though the law has been in operation but two weeks, and was greatly misunderstood by police and other officials, many habitual drunkards have already been sent away for long terms.

The old machine methods of trying cases of drunkenness are at an end. Having the discretion to sentence a drunkard, even for his first offense, to imprisonment for a year, and compelled to decide how long the term shall be, the courts try these cases with the same care which is bestowed upon those of other classes. When the guilt of the prisoner has been established, either upon his own plea of guilty or by the testimony of the officers, inquiry is made, very carefully, into his past record. If he cannot show that he is only an occasional offender he is imprisoned. It is not necessary for the Government to allege or prove anything, except that the person was drunk. That alone is punishable by a year's imprisonment. The Government has nothing to do with previous offenses. If the prisoner wishes leniency he may show that he deserves it by satisfying the court that he is not an habitual offender. The Government may, if it chooses, show previous arrests, *after conviction, but not before*, by way of assisting the court to decide how long the sentence should be. As a matter of fact this is generally done, but it is not obligatory.

Long sentences will make it possible for the habitual drunkard, by a long period of abstinence, to regain the will power and strength necessary for successful resistance to the temptations and demands which so easily overcome those under the control of this appetite. This cannot be accomplished in a short period. Months are required to secure it, and, while the experiment with him is in progress, the community will be rid of his presence, and the streets will be safer. If he has a family it will usually be relieved by his enforced absence.

The written statements which must be made in order to secure the release of a prisoner from a station house become a permanent record. If the person released repeats his offense this will be very accessible and valuable for future use. The man who has been released twice will be careful about the third offense when he knows that it is very certain to be followed by a term of imprisonment which he cannot escape by paying a fine.

DISCRIMINATION.

The new system provides for discrimination between individuals. If two persons are convicted of drunkenness, one of them may receive a sentence of a month, while another will be committed for a year, each according to his general character. The principle that the character of the offender rather than the character of the offense should determine the length of the sentence, is one which must, in the end, be universally recognized, and its adoption in this law is a long step forward.

The old law had no deterrent power. A fine had no terrors if the prisoner had the money to pay it, and most of those who had not had reached a point where a possible imprisonment for a few weeks would

not restrain. But the fact that men and women by scores are receiving sentences of three, six, nine and twelve months cannot fail to have a salutary effect upon those who are slipping into the ranks of the habitual inebriate. By making imprisonment the sole penalty for drunkenness, refusing to accept money in satisfaction for the offense, the State magnifies the importance of this crime.

REFORMATORY TREATMENT.

Besides our ordinary penal institutions, in which misdemeanants are usually confined, some of the most hopeful cases are sent to the State reformatories—that at Concord for men, and that at Sherborn for women. In these institutions special effort is made to secure reformation. It is to be hoped that eventually, when drunkards committed for long terms have taken the place of those held for thirty days, some effort will be made in county prisons for securing treatment having a more definite purpose to reform this class of persons.

DIPSOMANIA.

Several years ago Massachusetts recognized the fact that some persons who drink to excess do so because they are diseased. Unable, at the time, to do better, it passed laws which provided for the commitment of dipsomaniacs and inebriates to the lunatic hospitals, and hundreds have been thus dealt with. The recognition of the principle was a great step in advance.

The experiment led to another. The State has committed itself fully to the treatment of dipsomania as a disease. The Massachusetts Hospital for Dipsomaniacs and Inebriates is now in process of erection at Foxborough, about twenty miles from Boston. It will accommodate two hundred male patients. It is to cost \$150,000. It will be opened some time in the first half of 1892. Its first inmates will be those who have been committed to the lunatic hospitals for this cause. They will be transferred. The commitments which will follow will be made by precisely the same methods which now govern the commitment of other classes of insane, except that it will be alleged that the person is a dipsomaniac or an inebriate. It is required that the person committed shall be of good character, aside from his inebriety.

The hospital will start with many advantages. It will have this single class of patients, while the lunatic hospitals have been obliged to have them (sane in most respects after a week of confinement) mingled with other classes, the lunatic and the dipsomaniac both injured by the contact. The Trustees have been prevented from constructing ideal buildings by the meagreness of the appropriation, but the cottage system, in a modified form, has been adopted.

Much of the success of the institution will depend upon the skill and conscientiousness of those who make the commitments. As only a small percentage of those who are intoxicated frequently are dipsomaniacs, there is great liability, unless there is the most careful scrutiny, that the institution will be burdened with persons for whom it was not intended. This danger may be easily averted, however, and the institution bids fair to do much for the scientific treatment of the class for whom it has been created.

WHAT THE NEW SYSTEM CONTEMPLATES.

Seven things, then, have been attempted in recent Massachusetts legislation:

1. The fine as a penalty for drunkenness has been abolished.

2. Imprisonment has been made the only punishment for this offense.

3. Provision has been made for the treatment of drunkards by the courts as individuals, and not as a class.

4. The man who is intoxicated occasionally will be taken into custody until he is sober, and will then be released with the knowledge that succeeding similar offenses will be severely punished.

5. Full and complete records will be kept of this class of offenders, making possible the recognition of habitual drunkards.

6. Probation officers, appointed by each court, will investigate all cases, and take the surveillance of such persons as the court shall think can be better cared for at liberty than in prison, provision being made for surrendering for sentence those upon whom the experiment of probation fails.

7. Provision has been made for hospital treatment of those who have become dipsomaniacs.

The purpose in all this is to make it certain that each drunkard shall be dealt with as an individual. It will take time to educate the people and the officials to this, but eventually it will be seen that the community has so great an interest in the future of each drunkard that it cannot afford to have him treated as one of a class. The man who is intoxicated occasionally, the habitual inebriate, the drunken hoodlum, the dipsomaniac, each requires and deserves different management. The new Massachusetts laws provide methods for securing this.

DESCRIBED IN A SENTENCE.

The central feature of the new system is intelligent discrimination, based upon accurate information.

A TEN-MINUTE PAPER ON THE TREATMENT OF ALCOHOLISM.¹

By N. L. NORTH, M.D.,

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WHEN discussing the treatment of a disease, we have to consider many things, prominent among these are: The *cause*, can it be removed? The manner of development, can it be retarded? How far has it progressed? Is it still curable? Together with the age, sex, temperament, bodily vigor, the possible and probable power of recuperation of the patient, etc.

Much might be said, indeed much has been said here and elsewhere, upon the *remote*, the probable causes of the disease now called *alcoholism*. The *proximate*, the *immediate* cause of alcoholism is the imbibition of alcohol.

Drink causes the drink disease. In discussing the best medical *treatment* of a *disease* we cannot, of course, enter into the prophylaxis of the disease and so it will not be profitable at this time to attempt to consider at length the *remote* or *possible* causes of alcoholism.

We have the condition established: *Habit*; the yielding to custom; to a desire to please a friend; to a desire not to appear singular; or, to the direct desire for *stimulation*, continued in until it has become a second nature, until it has produced a diseased, abnormal condition of the vital organs and of the vital fluid, is the condition we have to contend with.

An acute, subacute, or chronic inflammation of some one or more of these organs; an acute, sub-

¹ Read at the Medical Congress, Staten Island, N. Y., July 16, 1891.

acute, or chronic inflammation of the brain or its meninges; an acute, subacute, or chronic inflammation of the central or peripheral nerves, with a more or less general progressive degeneration of the same, caused by the more or less constant presence of the disturbing, poisonous influence of the alcohol is, I say, the condition we have to contend with.

The question is: How can we get rid of this condition of things? How far will it be safe to remove this immediate *cause* of the difficulty? What medicines will best help us to do this?

Again, in what I have to say here, I shall consider it from the standpoint of the *private* practitioner, comparatively *few* who suffer from alcoholism can be treated in the asylums or retreats established for that purpose.

There are objections to sending a man or a woman to an inebriate asylum; financial, moral, and ethical. I cannot, of course, stop to discuss the propriety or impropriety of these objections; they *exist*—and the larger number of the alcoholic *habitués* have got to be managed by the ordinary physician, the general private practitioner. What is the best thing for *him* to do with these cases?

Is there any medicine known that will destroy the habit? *No!*

Is it safe to give opium or other stimulant, or narcotic, to *help* an individual to break off from alcoholic drinks? No; he may contract another and, perhaps, worse habit.

A person with strong nerve and will not too far overcome (with drink) may, perhaps, be assisted to stop drinking by the use of the bitter non-alcoholic tonics, in combination with capsicum. But, it must be thoroughly understood that the only way to overcome the drink habit and the drink *disease*, in whatever form it assumes, is to stop drinking.

Remove the *cause* of a *disease*, and you have then only to assist the natural recuperative powers of the system to repair the damage that has already been done.

Is it safe then, in the advanced stage of alcoholism with indications of *delirium tremens*, or dangerous insomnia, or other dangerous symptoms, to withdraw the alcohol entirely? That depends upon conditions, upon the age, state of the heart's action, natural strength of the individual, etc.

Perhaps, in some cases, the wisest plan would be to withdraw the stimulants gradually, and produce sleep and composure, with large doses of one of the bromides, or, in some cases, with opium administered boldly, yet cautiously.

Where it is possible (and we cannot expect to succeed without), it is best to have complete control of the patient. It will be necessary to have his consent, or if he is beyond giving it, then the consent and concurrence of whoever has charge of him, that the physician's directions and advice shall be followed to the letter, whatever happens. Then, as soon as practicable and safe, get rid of the alcohol *entirely*. Another thing, which I deem of the *utmost* importance, is to *stop* the use of tobacco. Science and observation alike, teach *me* that the depressing influence of the nicotine-plant *intensifies* the desire for alcoholic stimulation. The way back to drink and ruin, after reformation, in my observation, has often been through excessive tobacco indulgence.

In short, then, I would say, secure the entire control of your patient; secure his consent to the treatment, and the consent and concurrence of whoever is interested in his welfare; secure a nurse whom you can *trust* to do exactly as you bid him, and report to you everything he does, sees, or hears.

Then, at the earliest possible moment you deem it safe, either with or without the aid of opiates, bromides, or other nerve sedatives, take away *absolutely* the alcohol; the foreign element which is contorting the blood corpuscle, causing irritation and inflammation, deranging the secretions and excretions, producing thereby atrophy of the nerve cell and degeneration of the nerve fibre. Stop, also, the use of tobacco, and then encourage your patient to *eat*. Let him drink coffee—strong coffee for a time—and give non-alcoholic, bitter, warming, stomachic tonics, such as quinine, strychnine, capsicum, etc. Meet complications, and they will be likely to develop in many ways according to the tendencies and temperament of the patient, in a rational manner, only do not be tempted to use (or in any way consent to the use of) spirits or tobacco in any form. Be firm, yet, in every way, be encouraging, and helpful to your patient, and you have a right to expect success, if the case has not advanced to a condition absolutely incurable.

The Polyclinic.

MEDICO-CHIRURGICAL COLLEGE.

GYNECOLOGICAL EXAMINATIONS.

THE following points, taken from a lecture by Dr. E. L. B. Godfrey, at the Medico-Chirurgical College, are briefly given:

After an examination as to the general history of a case, and the symptoms pointing to a pelvic cause, place the subject in a dorsal position and examine:

1. *The Abdomen*, for inequalities in the surface; the presence or absence of the linea nigra and the linea alba, and for abdominal tumors. Note also if there be pain on pressure in the region of the tubes and ovaries.

2. *The Perineum*, if it be of the proper thickness and depth, or lacerated, which is found to be the case in varying degrees in about 75 per cent. of parous cases.

3. *The Vagina*, the condition of its orifice, whether patulous or painful to the touch; its walls, whether prolapsed or unduly moist.

4. *The Uterine Cervix*, its size, shape, direction, and mobility.

5. *The Os Uteri*, whether lacerated or not.

6. *The Uterine Fornices*, whether painful to touch, as is the case in cellulitis. Note whether a lump can be felt through the posterior, anterior, or lateral fornix.

7. *The Mobility of the Uterus*, whether limited in its normal range by parametric or perimetric adhesions.

8. *The Position of the Uterus*, as determined by the bi-manual and sound examinations.

9. *The Depth and Direction of the Uterine Cavity*, whether it be increased or diminished.

10. *The Tenderness of the Uterine Cavity*, whether it be marked, and bleeds upon being touched with the sound.

AN appeal is made in the *Berliner Klinische Wochenschrift* for funds for the restoration of the monument over the grave of the famous Arabian physician, Avicenna. Dr. Albu, who has recently returned from Persia, where he had been studying mountain fever, reports that the grave is in an utterly neglected state. Contributions may be sent to the German Ambassador at Teheran.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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TUBERCULOSIS IN THE CONVICT.

AN important paper upon the pathology of crime appears in the July number of *The Sanitarian*. Dr. W. D. Robinson, Physician to the Eastern State Penitentiary of Pennsylvania, gives the results of his observations of the convicts in his charge, as regards tuberculosis. Those who are familiar with the criminal class, can usually recognize its members, though it is not so easy to explain the distinguishing characteristics, so that others can detect them. In the same way, those who are accustomed to deal with feeble-minded children can pick out at a glance the defective members of a school-room full of children.

In the institution under Dr. Robinson's professional charge, the average population is about 1,100. Analysis of the mortality records for the last sixty years shows that more than 50 per cent. of the deaths are due to tuberculosis. The annual admissions for ten years have averaged about 550. Of these 18 per cent. could give no family history. Many more could give no reliable information. Among the rest tuberculosis has been remarkably present in their families. Out of 480 convicts received during one year the histories of 170 are given. Among these 158 were either themselves consumptive or of phthisical families, while in 8 cases epilepsy was found; in 7, insanity; in 6, alcoholism; and in 3 cases cancer.

"From 8 to 12 per cent. of the convicts in a State prison will be found to be of this criminal class. In them crime doing is so inherently a dominant factor in their characters that they never cease the commission of crimes. For the greater part of their lives they may have been subjected to the most efficient and rigorous means known for their reformation, but with practically no effect on their morality. The most prolonged punishments by prison confinement proves equally ineffective in inducing them to lead better lives. Although it is possible for an experienced expert in criminal study to readily recognize in his early history one who will inevitably always

be found enrolled among the crime class, it will nevertheless be accepted with less doubt that a man should properly be here classified, if a sufficiently long history can be obtained to practically prove the correctness of so recording him. Only the worst class of criminals and those sentenced to prolonged periods of incarceration are placed in State prisons. A study of the records of a State prison over a period of fifty or sixty years, will show that when a man has three or more times been sent to such a prison, his name thereafter will be repeatedly found enrolled until the end of his life. A selection, in consecutive order, of two hundred convicts who have been three or more times convicted and sent to penitentiaries, and a study of the family health history of each of these respective individuals, demonstrates that $74\frac{6}{100}$ per cent. of them have had occur three or more deaths from tubercular consumption in their respective immediate families, within the limit of father, mother, brothers, and sisters. This is certainly remarkable, and would seem to point strongly to the existence of a defective physical make-up as accounting for the abnormally immoral lives of these people. It would seem that such physical inheritance had also to do with the styles of crime committed by such unfortunate persons. Of 367 convicts who died of consumption in the Eastern State Penitentiary during the past sixty years four $\frac{9.2}{100}$ ($4\frac{9.2}{100}$) per cent. were convicted of assault and battery, while of the entire criminal population of that period seven $\frac{3.4}{100}$ ($7\frac{3.4}{100}$) per cent. were convicted of this crime; $\frac{5.5}{100}$ of one per cent. of the convicts who died of consumption were convicted of murder in the first degree, while $\frac{3.7}{100}$ of one per cent. was the proportion convicted of this crime in the total population. In murder in the second degree the respective percentages were $6\frac{1}{100}$ as against $2\frac{4.6}{100}$; counterfeiting, $1\frac{6.3}{100}$ as against $3\frac{7.5}{100}$; embezzlement, $1\frac{9.1}{100}$ as against $\frac{6.3}{100}$; horse stealing, $4\frac{1}{100}$ as against $3\frac{1.0}{100}$; robbery, $5\frac{7.4}{100}$ as against $4\frac{2.1}{100}$; burglary, $23\frac{7.5}{100}$ as against $14\frac{4.3}{100}$; larceny, $38\frac{5.4}{100}$ as against $45\frac{1.0}{100}$; arson, $4\frac{1.0}{100}$ as against $2\frac{1.4}{100}$. Closely noticing these figures shows that in some crimes, such as burglary and arson, the percentage is almost double in the convicts dying of consumption, as compared with the percentage found among the entire population."

There are several sources of fallacy in this statement that detract in some degree from its value. The term "consumption" is too indefinite for modern nomenclature, and means too much or too little. If by it all forms of wasting diseases are included, even those attributable to the imprisonment itself, it is too comprehensive. If tubercular phthisis be meant, it does not include non-pulmonary tuberculosis, or non-tubercular phthisis. The second fallacy relates with the contraction of tuberculosis through the medium of infected cells. With the large proportion of tubercular cases in our prisons, it is inevitable that without a systematic disinfection, enforced with a perfection that is scarcely probable under the circumstances, infection of cells, and consequent infection of the subsequent occupants, is most probable.

Dr. Robinson's paper is of especial interest as opening up the way to a most valuable investigation.

The questions of the infection of certain cells, of the efficiency of disinfection in such cells, the relations of crime with tuberculosis in general, of deficiency of physique, and of aberrations from the normal type of cranium, etc., with deficiency of the physical or mental constitution, form a fruitful field for the study of those who occupy the posts of physicians to prisons. Notwithstanding its incompleteness, Dr. Robinson's paper furnishes a striking illustration of the pathogenesis of crime. In this selfish struggle for existence, a certain proportion of the less fit give way to temptation, that brings to bear upon them a force not exerted against their stronger brethren. England impressed a young husband, leaving his wife destitute, and hung her for stealing a loaf to preserve her child from starving. While such shocking instances of the heartless application of the "survival of the fittest" principle cannot occur at present, we may still go a long distance further in the way of charity; finding in our present conditions of existence reasons, if not excuses, for a great proportion of the crime existent.

Annotations.

PROFESSIONAL SECRETS.

PHYSICIANS should stop to consider most carefully before they comply with the request of a life insurance company for private reports upon their patients. In one case a prominent physician of West Philadelphia was placed in a serious position. He had been asked for information concerning a patient, and his communication was promised secrecy. But very soon after having replied, his patient came to him with his letter to the company, and stated that his application for insurance had been refused on account of this letter, and two other companies in which he was insured had revoked their policies for the same reason.

The best way of dealing with such "confidential" requests for information is to deposit them carefully in the waste-paper basket, with the proprietary medicine circulars.

DISCUSSION ON TUBERCULIN.

THE discussion in regard to the Koch's institute for infective diseases at the Prussian Abgeordnetenhaus, has been repeated at the Herrenhaus. Baron v. Durant profited by the occasion to give prominence to homœopathy. Referring to the opinion of Prof. Taeger, that Koch's treatment of tuberculosis is a homœopathic method, he praised the homœopathic successes in the treatment of diphtheria, as well as Count Mattei's electro-homœopathy for the treatment of cancers. Based upon these he requested the Government to take steps to "free homœopathy from its inferior position (Aschenbroedelstellung) in the science of medicine," by instituting special departments for the study of homœopathy, supporting homœopathic hospitals, and opening a special department in the new institute, "in which the homœopathic treatment of patients may be united with Koch's experience and skill."

The secretary (Government) of the department for instruction advised Baron v. Durant, in a rather sar-

castic speech to address Prof. Koch directly, he (Koch) having carte blanche as to the means and ways to be adopted to further the interests of the institution, and to investigate all proposed treatments. Regarding the tuberculin treatment the secretary said as follows:

Gentlemen, you know that my position to the Koch matter is entirely and purely objective, and that any opinion which I now hold, is only caused through a study of the number of observations and experiments published, which study prompts me to say that the scientific value of the Koch's discovery has been recognized in general, and that the therapeutic value of this discovery will experience a most remarkable benefit, if Geheimrath Koch will succeed in producing the *pure* ingredient of his remedy. With this work he has occupied himself for months, and he informed me lately that he is in hope to finish his work in a few weeks, and that he will then present his discovery to the medical profession for minute examination. Only, then, the question whether this discovery will be beneficial from a therapeutic standpoint can be discussed and solved. I hope that such will be the case, but to positively claim its therapeutic value at this early day, I cannot do.

Letters to the Editor.

PHLEGMASIA DOLENS.

THE following treatment having been under my observation for twenty years—viz., twelve years of my father's practice and eight of my own—and having never known it to fail in a single instance, I take the liberty of enclosing it to you. I take it that it is not generally known, as I have never seen it mentioned in any medical journal or text-book.

For phlegmasia dolens I give hydrate of chloral, 2 to 5 grains in water, q. s., every two to four hours, accompanied by the usual treatment of elevating and bandaging the limb. Whatever the indications may be for other treatment, *do not stop the chloral*. The cure is usually very rapid. Chloral is applicable in all cases of phlebitis, from whatever cause.

A. W. COTTRELL, M.D.

VOLUNTARY ASYLUM COMMITTAL.

A YOUNG man recently surprised the Chicago County Court by entreating to be committed to an insane asylum, as he felt that impulses to homicide were increasing with him, and he feared that soon he would be unable to resist them. His request was granted. This will make a precedent for the defense of lunatics who have committed homicides in cases where the mental alienation is doubtful; but such claims, when crime is committed, should be regarded suspiciously.

A thirty-year-old book-keeper applied to me, recently, to secure admission for him to a State asylum. He had at times some of the trepidation of agitated melancholia, but his ailment resembled more a prodigious hypochondria. He said that he walked the floor at night, and "cursed his parents in their graves" for having conferred a rotten heredity upon him—they appear to have been mentally defective.

The patient was anxious to secure asylum treatment, and lessen his opportunities to commit suicide.

S. V. CLEVINGER.

DEFORMITY OF TONGUE.

SOME time ago, I was called to see a child, but a few hours' old, with a cleft soft palate. The halves of the uvula were lying on the floor of the mouth, at each side. The tongue was not in its normal position, but retracted, with the tip pointing toward the roof of the pharynx. Seizing the organ by the tip and pulling outward would bring the extreme end just to where the frænum linguæ was reflected off the floor of the oral cavity. Nursing was impossible, and liquid placed in the mouth was regurgitated through the nares. It died nine hours after birth. I was not permitted to hold a post-mortem examination, but death was probably caused by an undeveloped hyo-glossus muscle holding the tongue in such a position as to obstruct respiration.

F. U. FERGUSON.

GALLITZIN, PA.

BACK-ACHE.

FOR back ache following fevers, and at other times:

R.—Fl. ext. hydrangea,
Sp. nit. dul.....āā ʒij.
Sig. Teaspoonful every two hours, in water.

For drowsiness, tendency to coma, during fevers:

R.—Lloyd's specific belladonna gr. x.
Water..... ʒiv.
Sig. Teaspoonful every one-half to one hour.

These have never failed in my hands. I do not recommend the mixture in back-ache from uterine misplacement or sciatica, but in all others it is specific.

H. E. STROUD.

PHYTOLACCA.

THE history of poke-root, in my hands, has been this: Some years ago, in my readings, I came across the root under the name of garget; and garget being also the name for abscess of the udder in cows, it led me to make further inquiry, when I found that, in some sections, when a cow is threatened with or has abscess of the glands it is the custom to make a mash of infusion of poke-root and wheat bran, and feed it to the affected cow. It gives prompt relief. This led me to a trial of the infusion in mammary abscess in a woman. Result: The woman was terribly nauseated, vomited considerably, but the abscess went. The infusion being unreliable, but results promising so well, I next tried the fluid extract, in doses of 10 drops three times a day after meals, attending well to the condition of the bowels, by pre-mising the treatment with a saline cathartic. Results excellent in every case, dispersing the abscess in its early stages, and mitigating the disease in cases seen after the formation of pus.

In threatened abscess in any part, of any character, phytolacca decandra is the remedy *par excellence*. In my opinion, it is the best anti-suppurant (?) we have, and deserves a place in our Materia Medica, under that new title.

Now, its action in combination with aconite will be very clear to you, and its kindly action thus combined in *tonsillitis*, as per R sent last week, will be fully understood. I believe its action in all cases would be improved by adding the aconite.

WM. B. BIGLER, Jefferson, Class 1865.

SPRINGVALE, PA.

Book Notices.

A CLINICAL TEXT-BOOK OF MEDICAL DIAGNOSIS, FOR PHYSICIANS AND STUDENTS. Based on the most recent methods of examination. By OSWALD VIERORDT, M.D., Professor of Medicine at the University of Heidelberg. Authorized translation from the second improved and enlarged German edition, with additions by Francis H. Stuart, A.M., M.D. With 178 illustrations, many of which are in colors. Cloth. Pp. 700. Price, \$4.00. Philadelphia: W. B. Saunders, 913 Walnut street. 1891.

This is a work that we can recommend in the highest terms to our readers. It is full, explicit, based on the modern pathology, as viewed from the clinical standpoint. It is attractive from its fullness, and the old practitioner can scarcely open it at a page in which he will not speedily become engrossed. The illustrations are judicious and well executed; the diagrams especially apt. The mechanical execution of the book is likewise creditable to the publisher. We have often approved of works as worthy of a place in the physician's library, but never with better reason than in the present case.

The Medical Digest.

OBSTETRIC AND GYNECOLOGICAL NOTES.

By E. S. MCKEE, M.D.

THE Treatment of Abortion, a Subject of Great Practical Importance, Because One Which is Always With Us, was the subject of a very able paper before the Cincinnati Obstetrical Society, at a recent meeting, by Dr. Charles L. Bonni-field, of Cincinnati. Abortion is not only of importance on account of its danger and its frequency (for it is known abroad as "the American sin"), but also assumes a gravity on account of the many evil consequences which may follow in its wake. Dr. Bonni-field did not enter into the field of the literature of the subject, knowing his hearers to be amply acquainted with that. The first question to be decided was, Is prevention possible? for the treatment of abortion included also its prevention. The amount of hemorrhage, severity and duration of pains, and the degree of dilatation are questions to be considered. Secure rest of body, mind, and nervous system. Secure this by a hypodermic injection of morphine, followed up by opium, per os or rectum; and, if the patient be a nervous one, chloral and bromide. If uterus retroverted or flexed, correct at once.

Dr. E. S. McKee, of this Society, reports a case where abortion was repeatedly prevented by the use of diosburnia, made by the Dios Chemical Company, of St. Louis, in dessertspoonfuls three times a day. Viburnum prunifolium is also strongly recommended by Jenks and others. Abortion being recognized as inevitable, the hemorrhage severe, and the cervix dilated, the ovum should be detached and delivered at once. Otherwise, the expectant course is the best, though the patient must not be left long at a time by her attendant. Hemorrhage profuse and cervix not sufficiently dilated to allow of immediate delivery, tampon with absorbent cotton, tampons immersed in an antiseptic solution. Very careful directions as to tamponade were given. He prefers to dilate with an instrument in preference to a tent, as it is more aseptic and more rapid. He doubts the wisdom of the advice of many wise men to administer ergot while tamponading, and never follows this

advice. Uterine contractions due to ergot are of a constant, unrelenting character, that are not conducive to the detachment of the ovum in its entirety. The exceptions to the rule, give ergot only when the uterus is empty, are few indeed. The doctor favors the immediate removal of the retained products of conception. He believes it can be done with perfect safety, provided it is done with ordinary skill, and antiseptically. If the conditions are favorable, the finger is the instrument best adapted to explore and to clean out the uterus. In a large proportion of cases the condition of affairs is such that it becomes necessary to employ some other instrument. He has found the placental forceps of Dr. Reamy to act with great success, which forceps he described, together with the method of their use. The three points of merit in the instrument are its simplicity, safety, and efficiency. Creolin he finds a very reliable antiseptic for the obstetrician's use, and advises the uterus to be washed out with it after being emptied. It is not toxic. The after-treatment is the same as of a woman at full term, careful attention being given to the work of involution, which seems loth to begin.

The discussion which followed this paper was very interesting.

Dr. C. D. Palmer favored the use of viburnum prunifolium to prevent abortion, and chlorate of potash in habitual abortion.

Dr. T. A. Reamy had no faith in viburnum prunifolium, but spoke earnestly in favor of his forceps for removing the remains of an abortion, which instruments had been passed over by nearly all of the other members of the Society for the ever-ready forefinger.

Dr. McKee assented to the mention of the favorable results attained by him in the use of dioviburnia, which good results had since been frequently duplicated. He remembered reporting to the Cincinnati Academy of Medicine a case of habitual abortion very successfully prevented by the chlorate of potash.

Uterine Displacements formed the topic of an interesting discussion in the Washington Meeting of the Obstetric Section, American Medical Association. Papers were read by Drs. W. J. Asdale, Pittsburg; J. H. Kellogg, Battle Creek, Mich., and C. R. Reed, Middleport, Ohio.

In concluding the discussion Dr. W. J. Asdale, Pittsburg, said: In over twenty-five years of professional work his accumulation was large. In almost all cases pessaries had proven inefficient as a cure, and sometimes positively injurious. He was unwilling to allow that the unsatisfactory results of his experience had occurred through lack of tact and ill adaptations. He believed his own to be the common experience and the sum of the experience of all, and that which the great body of capable and earnest workers in gynecological practice find so difficult to learn and so generally unaccomplished, must be impractical and erroneous. He could not say with Fritsch that he had spent ten years in learning the treatment by pessaries, but he agreed with that distinguished gynecologist that it is easier to perform a laparotomy than to apply a well-fitting and serviceable pessary.

His object in introducing the subject had been accomplished. He was gratified that in the discussion here the great weight of testimony had been developed in support of his declaration as to the general inutility and frequent harmfulness of pessaries.

He had proposed ventral suture for but a limited number of cases, but these were the worst cases, a class hitherto practically quite abandoned to their

sufferings, viz., the extreme conditions of complete prolapse and of flexions with impaction; cases in which, in his judgment, no other management could be effectively employed. The results of hysterorhaphy in his own cases had thus far been so happy that he felt justified in urging the adoption of this mode of treatment for the aggravated cases.

Dr. Asdale commended the paper of Dr. Kellogg. All can unite in condemnation of the corset and high-heeled shoes, and in advocacy of hygienic laws in application to occupations and care of body for women.

Dr. Julian W. Carpenter, Cincinnati, O.: Exceptions are often as valuable aids to diagnosis as rules. Were there no exceptions medicine would be an exact science, and instead of having only the average result for a starting point in all cases, every diagnosis would be as certain and easy as mathematics.

Prominent among the causes of sterility are ante-flexion, extremely small os and conoidal cervix, the last stated by some authors to be the most common of all. Any one of these being a sufficient cause, what would be thought of a patient having all three of these peculiarities. Many cases like the following would necessitate rewriting all the text-books.

Mrs. H., thirty-three years of age, came for an examination for this reason. She was troubled at times with a cramp and burning sensation in the right thigh, in a spot about the size of a hand. Having tried various remedies without relief, she wondered whether it could in any way be due to internal trouble. An examination revealed the following conditions: A sharp ante-flexion at the junction of the cervix and body; a greatly elongated and conoidal cervix, nearly two inches in length, with an os of the very smallest size. Close questioning elicited the following information. She never had dysmenorrhœa to any extent, nothing that could be called pain, only a little discomfort at first and that had grown less each year. She never had uterine catarrh, or any symptom to call her attention to the internal organs. Were it not for the cramp referred to, an examination would never have been considered.

I explained her formation to the patient, and told her the rule was that a person with any one of these peculiarities did not have a family, and that having all three, her prospects were meager. To see whether the cramp was a reflex from some internal pressure, a few weeks' treatment was given, but it made no change in affairs. Electricity applied to the affected limb gave some temporary relief.

A year later she returned for another examination, and was glad to be told that she was pregnant. Two other physicians saw her between that time and the birth of her child, and each spoke to her of the peculiar cervix. The birth of the child took place in another city, but the report was as one would expect. The first stage was very tedious, lasting three days, though there were no severe pains. The contractions of the second stage accomplished nothing. The patient was closely built and fleshy. Instrumental interference proved necessary, with high application of the forceps. The weight of the child was ten pounds. The mother made a good recovery.

The patient was seen recently again when the child was two and one-half years old. The cervix is now of ordinary length, and a very slight ante-flexion exists at the junction of cervix and body. A laceration on the left side extends nearly the length of the cervix, but there is neither catarrh nor erosion, and the patient says she is in good health.

Another interesting point is, that the cramp in the limb grew much more severe before the birth of the child, but since that event it has never returned, indicating that it was without doubt a reflex from the peculiar internal condition.

Dr. Thomas Opie, Baltimore, said: In the cases of hysterorrhaphy for retro-displacements, as narrated by Dr. Asdale, it seems to have been his practice to remove the ovaries in all cases. Would it not be possible, and if no better practice, in certain cases to break up existing adhesions of the uterus and ovaries, and pin the intact organs forward by the round ligaments so that the fundus may form an attachment to the abdominal incision?

I am sorry that Dr. Kellogg has so slandered American women, for I have always, from my youth up, admired slender waists. I think that in many of these cases disorders are not due to tight lacing, but to troubles which arise in the pelvis.

Dr. W. H. Humiston, of Cleveland, said: I cannot agree with Dr. Reed on the use of pessaries. He must have a far different class of cases than mine if he can shove in a pessary regardless of the inflammatory condition of the appendages and get good results. Cases of this kind, for good reasons, will not tolerate a pessary. I use pessaries temporarily after I have subdued the congestion, curetted the uterus and repaired the lacerated cervix. I find that after a short time, the uterus is so much reduced in size and weight, that it will remain in place without artificial support. I always place the patient in the knee-chest position and replace the uterus completely, before introducing the pessary.

Dr. Joseph Eastman, Indianapolis, said: I recognize Dr. Reed as the gentleman whose paper I defended before this Section at St. Louis some years ago. I mention this to the end that the doctor may not think me prejudiced. I feel that it is my duty to condemn his paper and his treatment at the present time. Patients have been treated in the manner which he describes for centuries. Where the uterus was really cancerous they have gone on and died just the same. We now have another treatment or trial—total extirpation of the uterus. That is the best palliative treatment, and, at the same time, it offers a hope of cure. The doctor talks as if hysterectomy were a most dangerous operation. I have had no deaths in my last twenty-one cases. I am opposed to the doctor's treatment because it comforts while the day of grace passes rapidly by. We must make an early diagnosis. I am willing to make a mistake occasionally and remove a uterus not yet cancerous (when the organ is making the woman a physical wreck) than wait until the perimetrium is involved.

Dr. Jno. H. McIntyre, of St Louis, said: Previous to the last ten years I used a great many pessaries, and I believe I know how to adjust them properly. Since that time I have not introduced them, but I have removed a great many. I have a big drawer full of them at home and many of them are the Hodge. I am a firm believer in ventro-fixation. I consider aseptic pledgets of wool saturated with boro-glycerine, much better than any pessary. The dependence upon pessaries, may be likened to a man who cannot swim, who, when thrown into deep water, must have a plank to keep him up; teach him to swim and he needs no plank. Relieve the inflammation, the engorgement, the congestion, the weight of the womb, and your patient needs no pessary. I believe that pessaries have done more harm than good, and that womankind would be better off if they had never been thought of.

Dr. C. R. Reed, Middleport, O., said: There is probably no subject in gynecology on which so much has been written, so many instruments and appliances invented, for which so much money has been expended, as that of uterine displacements. The idea which prevails with many physicians, that all that is needed to relieve displacements is to push a pessary into the vagina and let it adjust itself, is the cause of failure in obtaining success with these instruments. If the pessary is of proper size and shape, and correctly placed, if it be occasionally changed in shape, width, and length, we will almost always get good results, if we persevere in their use. In my opinion, nothing has ever been invented which was such a boon to suffering woman as the "Hodge lever pessary," with its various modifications. If physicians do not get good results from the lever pessary, in my opinion they do not know how to use it. (A quotation was given here from Emmet's Gyn., p. 302.) I commenced using the various forms of the lever pessary over twenty years ago, and no instruments or surgical appliances have given me greater satisfaction than this. Each individual case of displacement must be studied by itself, and the pessary carefully adjusted to it. We will be generally satisfied with the result, if the case be one of displacement only.

Dr. I. S. Stone, Washington: I think pessaries satisfy the mind of patients, and in this way do more good than in any other. I think displacement, less than peridientia, does no harm, unless other organs and tissues adjoining are diseased. The only cases cured by the pessaries are those followed by pregnancy. I would do hysterorrhaphy if there seemed a chance for success.

Dr. McIntosh, South Carolina: The current is now setting the other way, and I verily believe it has gone too far. I rise to give my evidence in favor of the much-abused instrument. I have done much good with it.

Dr. J. M. Baldy, Philadelphia: I have done much good with pessaries. It has been my experience that uncomplicated retro-displacements give no symptoms. A pessary is sometimes invaluable as a temporary relief of symptoms. The pessary should be frequently removed, washed, and returned. As to hysterorrhaphy, the uterus is not an abdominal organ, and the moment we make it one we will have trouble. Adhesions above will harm as well as below. I do not do hysterorrhaphy. I am not willing to put the uterus in a pathological position.

Dr. John Crawford, of Illinois: It is very evident that the men who have been doing the talking here are men who have been practicing in cities or sanitariums. In the country we cannot see our patients every day, and hence find pessaries useful. I prefer a Hodge to wool. Dr. Kellogg has given us a hint. We must remove the cause, and we do not need the remedy. Constitutional treatment is worth all, if used in time—that is, with the girl or woman after first confinement.

Dr. Davis, Philadelphia: I have removed pessaries introduced by Smith several years ago. In Karl Braun's clinic I saw Hodge's pessary used frequently, and wrong end, too. There are not many cases on record of pregnancy after hysterorrhaphy; the anterior uterine wall had become thin, and uterine rupture was threatened.

Dr. A. P. Clark, of Cambridge, Mass.: I once removed a pessary which had been in situ for fifteen years.

Dr. Williams, of Baltimore: In the last number of the *Centralblatt für Gynäkologie* are reported fifteen cases of pregnancy following hysterectomy, and the course was favorable. The report was made by Saenger.

Dr. Henry O. Marcy, Boston: We men are at fault for the way women dress and displace their uteri, for it is to please us men that the dear little creatures harness themselves up so.

NAPHTHALINE AS A VERMIFUGE.—According to Dr. Mirovich, of Bielsk, naphthaline is an admirable remedy not only for ascarides, but for tapeworm. He considers it much more certain and far less poisonous than most of the other vermifuges. For grown up people he prescribes a 15 grain powder, to be followed immediately by 2 ounces of castor oil. For two days before this dose the patient is directed to live on salt, acid and highly seasoned food, then the naphthaline is given fasting early the following morning. In the case of children naphthaline may be mixed with castor oil, flavored with a drop or two of bergamot. In all the cases in which this plan was carried out, including some in which more ordinary means had failed, the whole tænia was expelled with its head after the first dose.—*Lancet*.

OPIUM SMOKING IN PULMONARY TUBERCULOSIS.—I have very little faith in the reported evil effects of opium smoking. I have tried it for the relief of pain and have found it beneficial, though of decidedly feeble action as a narcotic. As applied to the use of tobacco, the term generally means simply tobacco burning. Real smoking means inhaling the tobacco into the air passages, not simply drawing the smoke into the mouth and puffing it out again. This latter process is that which is adopted by the great majority of smokers of tobacco. Inhaling the fumes produces in the case both of tobacco and of opium much more marked effects. It is this that the Chinaman does. He does not "swallow" the smoke, but he "inhales" it. It seems to me that merely "mouthing" the smoke of the medicated tobacco cannot be nearly so useful as "inhaling."

—W. Henry Kesteven, in the *Lancet*.

MAXILLARY ABSCESS.—The second patient was a female, forty-four years of age, who had a large abscess of the superior maxilla, the result of diseased teeth. This condition, the operator stated, may be due to caries of the teeth, or to pathological changes occurring in the structure of the bone itself.

The treatment of this abscess consists either in puncture or incision, and the extraction of one or more of the teeth, if they be found to be connected with the origin of the disease. If free drainage be established by an early incision, the arrest of the disease is practically secured. Dr. Wyeth stated that the treatment of this case consisted in the establishment of free drainage by an incision over the abscess, the extraction of the first or second molar tooth, and, if necessary, the removal of a portion of the alveolar process with the forceps. It was also important to explore the cavity with the finger, to determine the presence of dead bone or other offending matter. Free drainage would be maintained until complete recovery had been brought about.

The abscess was then opened under cocaine anaesthesia, a soft rubber drainage tube inserted, and the cavity thoroughly irrigated with a 1 to 2,000 bichloride solution. A safety pin was then placed at the external end of the tube, and a strip of iodoform

gauze between it and the skin. Over this was placed the ordinary bichloride gauze dressing, which was secured by a roller bandage.

—Wyeth, *Int. Jour. Surgery*.

NEW REMEDIES—A LIST OF THOSE MORE RECENTLY INTRODUCED, THEIR ACTION AND POSOLOGY.—At a recent meeting of the Chemists' Assistants' Association (London), Mr. H. Helbing read a paper on "New Remedies," to which he appended the following list, which will be found useful as a matter of reference:

Acetanilide.....	Analgesic and antipyretic.....	2 to 5 grs. per os.
Acetylphenylhydrazin.....	Antipyretic and analgesic.....	3 to 5 grs. per os.
Agaricine.....	Antisudorific in phthisis.....	$\frac{1}{2}$ gr. per os.
Amylene hydrate.....	Hypnotic anodyne.....	$\frac{1}{2}$ gr. to 1 dr.
Anthrarobin.....	Against skin diseases.....	
Antipyrine.....	Antifebrile and anodyne.....	15 to 30 grs. per os. or subcutaneously.
Aristol.....	Antiseptic and in skin diseases.....	
Benzoyl anilide.....	Antipyretic.....	$\frac{1}{2}$ to 5 grs. per os.
Ben zoylgaiaacol.....	Antitubercutic.....	4 to 10 grs. per os.
Betol.....	Antigonorrhoeic.....	In bougie.
Bismuth salicylate.....	Against gastric affections.....	6 to 15 grs. per os.
Bromoform.....	Against pertussis.....	1 to 2 min. per os.
Camphoric acid.....	Antisudorific in phthisis, etc.....	30 grs. per os.
Cetrarin.....	Stomachic.....	2 grs. per os.
Chloralamide.....	Hypnotic.....	30 to 45 grs. per os.
Chloralurethan.....	Hypnotic.....	15 to 45 grs. per os.
Croelin.....	Antiseptic.....	5 min. internally.
Creasote.....	Antitubercutic.....	3 min. per os.
Ethyleminine hydrochloride.....	General stimulant.....	$\frac{1}{2}$ to $\frac{1}{3}$ gr. subcutaneously.
Exalgine.....	Analgesic.....	4 grs.
Guaiaacol.....	Antitubercutic.....	1 min. per os.
Hydrastinine.....	Against uterine hemorrhage.....	1 gm. subcutaneously.
Hydroxylamine.....	Against skin diseases.....	Externally.
Hydracetin.....	See acetylphenylhydrazine.....	
Hypnone.....	Hypnotic.....	3 to 8 min. per os.
Ichthyol.....	Antirheumatic; against sciatia, erysipelas, skin diseases.....	Externally and 4 to 20 min. per os.
Iodine trichloride.....	Antiseptic.....	Externally in 1 per cent. of solution.
Iodoform bituminate.....	Antiseptic.....	Externally.
Iodol.....	Antiseptic.....	Externally.
Laoline.....	As an ointment base or vehicle for other medicaments.....	
Mercury phenate.....	Antisyphilitic.....	$\frac{1}{2}$ to $\frac{1}{3}$ gr. subcutaneously.
Mercury peptoglutine.....	Antisyphilitic.....	$\frac{1}{2}$ gr. subcutaneously.
Mercury salicylate.....	Antisyphilitic.....	$\frac{1}{2}$ to $\frac{1}{3}$ gr. subcutaneously.
Mercury succinimate.....	Antisyphilitic.....	
Methacetin.....	Antipyretic.....	3 grs. per os. for children.
Methylal.....	Hypnotic and anaesthetic.....	15 to 30 grs. per os.
Methylene blue.....	Analgesic.....	8 to 15 grs. per os.
Methylene chloride.....	Narcotic anaesthetic.....	
Monobromacetanilide.....	Analgesic.....	1 to 8 grs. per os.
Myrtol.....	Antiseptic in phthisis.....	5 min. per os.
Naphthalene.....	Antiseptic.....	2 to 8 grs. per os.
Naphtholic acid.....	Antiseptic and antiparasitic.....	
Naphthol.....	Antiseptic.....	
Naphthol camphoratium.....	Antiseptic antitubercutic.....	Subcutaneously.
Orexin hydrochloride.....	Stomachic.....	$\frac{3}{4}$ grs. per os.
Paraldehyde.....	Hypnotic and sedative.....	15 to 45 min. per os.
Phenacetin.....	Antipyretic, antineuralgic.....	8 to 20 grs. per os.
Phenylurethan.....	Antifebrile, antirheumatic.....	6 to 8 grs. per os.
Piperazide hydrochloride.....	General stimulant.....	Externally.
Pyocetaniil.....	Antiseptic.....	
Pyridine.....	Antiseptic.....	1 to 1 $\frac{1}{2}$ drs. by inhalation.
Pyrodiin.....	See acetylphenylhydrazine.....	
Resorcin.....	Antiseptic antifermentative.....	
Rubidium ammonium bromide.....	Antiepileptic.....	$\frac{1}{2}$ to 1 $\frac{1}{2}$ drs. per os.
Salipyrin.....	Antifebrile, antirheumatic.....	15 grs. per os.
Salol.....	Antiseptic antigonorrhoeic.....	15 to 30 grs. per os.
Sodium theobromine salicylate.....	Diuretic.....	8 to 15 grs. per os.
Sodium anisate.....	Antipyretic, antirheumatic.....	15 grs. per os.
Sodium dithiosalicylate.....	Antipyretic, antirheumatic.....	3 grs. per os.
Sodium paracresotate.....	Antipyretic, antirheumatic.....	8 to 15 grs. per os.
Somnal.....	Hypnotic.....	30 min. per os.
Soziodiol.....	Antiseptic.....	Externally.
Sulphaminol.....	Antiseptic.....	Externally.
Sulphonal.....	Hypnotic.....	15 to 30 grs. per os.
Terpine hydrate.....	Against pulmonary affections.....	16 to 18 grs. per os.
Terpinol.....	Against pulmonary affections.....	2 min. per os.
Tetronal.....	Hypnotic.....	15 to 30 grs. per os.
Thallin sulphate.....	Antigonorrhoeic.....	Injection.
Thiol.....	Ichthyol substitute q.v.....	
Tribromphenol.....	Antiseptic.....	Externally.
Trional.....	Hypnotic.....	15 to 30 grs. per os.
Thioresorcin.....	Antiseptic.....	
Urethane.....	Hypnotic.....	15 to 40 grs. per os.

MERCURIAL OINTMENT IN GLANDERS.—Dr. Gold, of Severinovka, near Odessa, has been fortunate enough to cure two cases of glanders occurring in peasants, by means of rubbing in strong mercurial ointment. In both cases there was bronchial trouble, pyrexia, and a considerable number of indurated nodules, as well as soft, fluctuating, and even phlegmonous swellings all about the body. The examination of the purulent and serous contents of these at the Odessa bacteriological station showed the presence of the virus of glanders, as animals inoculated from cultures succumb to a disease typically resembling glanders. Half a drachm of very strong mercurial ointment was rubbed in twice a day in each case for about a month, when the cure was complete. The effect on the mouth was combated with chlorate of potash gargles, and the suppurating spots were treated by poulticing, incisions, washing out with solutions of perchloride of mercury, and dressed with iodoform gauze. The first of these two cases was treated in 1888; the patient is still alive and in the best of health. Dr. Gold has had some thirty cases of glanders in his practice, all of which have proved fatal except these two. The idea of using mercury was suggested to him by the fact that in some respects there is a similarity between glanders and syphilis, and by the active microbicidal properties of mercury.

—*Lancet.*

PEROXIDE OF HYDROGEN IN GYNECOLOGY.—The value of peroxide of hydrogen as a detergent and purifier has long been known, and when applied as a dressing to foul ulcers (syphilitic or otherwise) has given good results. Some time since, while treating a case of sepsis, in which pus was freely discharging from abraded surface on vaginal wall, I thought I would try the effect of the peroxide. I had previously had the part twice daily syringed with weak solutions of carbolic acid, iodine, sanitas, and Cond's fluid, without much effect. I found the solution of peroxide act as a charm in checking the secretion gradually, cleansing and healing the abraded surface, and producing no irritation; and I venture to suggest it as a suitable application, more especially to the female genital tract. One teaspoonful added to half a pint of warm water, gradually increased in strength, will, I feel sure, be found a valuable addition to the many antiseptics used in such cases. I may also suggest that in all cases where there are symptoms denoting septic absorption during the lying-in period, a close examination of the vaginal walls and cervix uteri for tear or abrasion should be made, and, when discovered, the part thoroughly cleansed and cauterized with strong carbolic acid. I believe I can attribute the recovery of more than one patient, whom I had been called to see in consultation, to the adoption of this plan. But I much prefer the prevention of such accident by flushing the uterus with hot water directly after labor, examining at the same time for any tear or injury, and cauterizing or suturing the surface then and there. I hope the suggestions thrown out may be found of value in practice by both the obstetrician and gynecologist, and contribute in some measure to the alleviation of suffering.—Alex. Duke, in *The Lancet*.

SPECIFIC MEDICATION.—The remedies indicated in some cases of enuresis are:

Belladonna, when the incontinence is due to an enfeebled pelvic circulation or spinal congestion; gtt. x to water $\bar{\text{z}}$ iv; dose, teaspoonful.

Epigea repens, debility and relaxation of the bladder with irritable mucous membrane.

Nux, a stimulant especially adapted to chronic cases, in which it gives prompt relief.

Santonine, of great value in retention of urine, but also useful in some cases of enuresis depending upon irritation of the vesical sphincter.

Thuja restrains enuresis, both the bed-wetting of children and the dribbling of the aged, unless paresis exists.—Howe. Dose, gtt. j to iij every four hours.

Another addition to the color treatment of disease has been made in the use of indigo for amenorrhœa. Several very flattering reports of its successful use have appeared, but the exact conditions in which it proved beneficial have not yet developed.

Cascara sagrada is indicated in constipation due to nervous and muscular atony of the lower bowel, with diminished sensibility; constipation depending on indigestion and neglect of nature's calls.

Nux, constipation with a feeling of fullness in right hypochondriac region; pain in shoulder and side; sallowness of face; yellowness of eyes; yellow coat on tongue. Dose, j to iij gtt. three times a day.

Esclusus, constipation with lowness of spirits, vertigo, gastric derangements, hemorrhoids, hard and difficult stools. Dose, gtt. x three times a day.

Rheum, constipation with unnatural sensation of constriction in the stomach and bowels, and contraction of the abdominal muscles.

Euonymus, constipation with torpidity of the liver, and general debility. Dose, $\bar{\text{z}}$ j to $\bar{\text{z}}$ ss three times a day.

Juglans cinerea, constipation attended with flatulence, gastric irritability, and acid eructations coming on after diarrhœa. Dose, gtt. x thrice daily.

Podophyllin, constipation with dyspepsia, hepatic torpor, general fullness of tissues, and headache. One-tenth of a grain three times a day.

The latest conclusions reached by those engaged in the study of the bacillus diphtheriticus are that diphtheria is an intoxication caused by an extremely active poison which is formed by a microbe in or near the point of inoculation. When this poisonous substance is cleared of bacilli and injected, it will produce diphtheria. The bacillus thrives in an alkaline medium, while acids kill it. This would seem to suggest an acid treatment for this disease.

Dioscorea villosa, is indicated in bilious colic, colic from the passage of gall stones, colic with sharp, cutting pains in the abdomen; pain of a tearing character, aggravated by walking; nausea and vomiting, with yellowness of the skin.

Hydrangea arborescens will prove of great benefit in cases of urinary calculi and stone in the bladder. While it does not seem probable that this remedy could dissolve a stone, especially in the small doses in which it is given, still the fact remains that, under the use of small doses of hydrangea, the concretion does break up and pass away in larger and smaller particles. The size of the dose will vary in different cases—from ten to thirty drops three or four times a day.

Inflammation of the testicle, gonorrhœal or otherwise, is an indication for the use of pulsatilla. No other internal remedy is needed when the symptoms are those of simple testicular inflammation. We do not believe in prescribing at names, but prefer to particularize the symptoms of morbid conditions and meet them singly. In the case of orchitis, however, we can retain the name, and prescribe for the totality of symptoms with the one remedy. Indications for pulsatilla, orchitis. This, with cooling lotions, suspension, and strapping, will cure the disease.

—*Eclectic Med. Jour.*

COPPER IN THE TREATMENT OF DISEASES OF PLANTS.—Freshly precipitated and moist copper hydrate seems likely to occupy a place in agricultural science next in importance to that of manure. A mixture of lime and copper sulphate has been employed, for some time now, with success, as an insecticide or germicide in the treatment of disease of the vine, potato, and tomato; and quite recently M. Aimé-Girard applied the same mixture to sugar beet plants threatened with the attacks of a specific fungus, which gives rise to the disease known as "peronospora Schachtii." Three per cent. solutions each of copper sulphate and lime are mixed with water, and the mixture sprayed on the crop with an apparatus which a laborer can carry on his back, so enabling him to dress four rows of beets at a single operation. Under this treatment the disease is said to be effectually stayed, the leaves to become more luxuriant, and the stalks to be so preserved that those attacked grew richer in saccharin constituent, while the proportion of sugar in the root was found to have increased 1.58 per cent. All this must be of special interest to the sugar grower, whose loss from this cause is often considerable; but it cannot fail also to engage the attention of the agricultural chemist. As every student of elementary chemistry knows, lime-water (hydrate) and copper sulphate give calcium sulphate and copper hydrate; but it is to the latter body, of course, that the fungus-destroying action is due. Copper hydrate would appear to act on fungi as a weak solution of perchloride of mercury, without, however, affecting the growth or life of the plant, and its action may possibly be akin to that which takes place when it is added to solution of peptone-albumose. With this body it combines to form an insoluble compound—a reaction which has been taken advantage of in the separation and estimation of this variety of peptone. The effect, however, of using copper compounds for purposes of the kind above mentioned, must be watched with due care, as plants are known to assimilate the metallic salts with readiness. Cereals, for instance, have been found to derive an important quantity of copper from the soil, and in view of the enormous consumption of sugar by infants, as well as by invalids, the question may possibly become of no little moment, upon the merits of which chemical analysis will, in course of time, decide.—*Lancet*.

INFLUENCE OF MINERAL CONSTITUENTS OF THE BODY UPON IMMUNITY FROM DISEASE.—In the present paper we intend to consider the effect of potash, reserving for another communication the effect of lime, magnesium, and alumina, as our experiments on them are not yet concluded. In February of this year we commenced the research by feeding a number of guinea pigs with bran containing potassium chloride (30 to 60 grammes per kilo.). They took this food readily, and were fed on it and on cabbage for periods varying from three weeks to three months. They all maintained excellent health and in no case lost weight. The animals were then inoculated with anthrax, controls being also inoculated with the same virus. We think our method of feeding the animals preferable to that adopted by MM. Fodor and Chor, as in every case the animals remained in perfect health till inoculated. The results were as follows:

(a) Six guinea-pigs, fed with potassium chloride for periods varying from three to six weeks; three control animals fed in the ordinary manner. Inoculation with a virus (proved to be fatal to rabbits in three days) caused development of anthrax in all

the animals, so that all died in from forty to forty-eight hours.

(b) Six guinea-pigs were fed with potassium chloride during two months; six control animals were fed in the usual way. Inoculation with a feebly virulent anthrax (Pasteur's second vaccine) proved fatal to all in from forty-four to seventy hours. Four of the prepared animals died before any of the controls.

(c) Two guinea-pigs, fed (with a short intermission) with potassium chloride for three months, and one control animal, were inoculated with the second vaccine anthrax. One of the prepared animals was moribund in forty-four hours, the other two being found dead next day. Typical cultures of anthrax were obtained from all the animals mentioned above.

The result of our experiments is that saturation of guinea-pigs with potassium chloride in no way confers immunity against anthrax—in fact, that in animals thus prepared death occurs more rapidly than in control animals. This result may be due either to a positive action of the potash itself or its having tended to cause elimination of other bases, such as sodium or calcium. We think it is just possible that if the food of Fodor's animals happened to contain a large proportion of potash salts, the comparative immunity produced in them by the injection of soda might be due, not to any positive action of the soda, but simply to its tending to displace a certain proportion of potassium from the body.

Our experiments upon the action of calcium, magnesium, and aluminium are now in progress, and we hope shortly to communicate the results of them.

—Lauder Brunton, *Brit. Med. Jour.*

EFFECT OF QUININE ON THE HEALING OF WOUNDS.—Dr. Sokoloff has published some interesting observations on the effect of quinine administered to a wounded animal on the granulation and cicatrization of the wound. The experiments were conducted on rabbits. The fur was shaved from a portion of the paw, and an incision made through the skin and into the muscular tissue, the external wound being then sewn up and the whole dressed antiseptically. Subsequently microscopical observations were made in sections, including the wound. Twenty-four rabbits which were experimented on in this way were treated with hydrochlorate of quinine, $\frac{1}{2}$ a grain of which was given per diem for each kilogramme of body weight. A similar number of control rabbits were operated upon in precisely the same manner, but were not given quinine. Dr. Sokoloff gives a detailed description of the microscopical appearances observed each day for eight days in the two sets of cases. The effusion of blood was much the same in both, but there was a marked difference in the condition of the muscular tissue. In the control animals this lost its striped character, the portions in the immediate vicinity of the wound presenting the appearance of an amorphous homogeneous substance containing here and there a few muscular fibers, or breaking up into separate pieces as in coagulation necrosis. Besides this, the muscular tissue gradually disappeared, leaving sheaths of sarcolemma either empty or filled with cells. In contrast to this state of things, sections taken from the animals treated with quinine presented little or no sign of muscular degeneration, the fibers preserving their proper structure. With regard to the cellular elements in the control animals, two forms were found in the neighborhood of the wound—a large number of multi-nuclear leucocytes, and a much smaller number of large round or oval cells with a

single large nucleus. The mean diameters of these cells after three days were 19μ and 16μ , after five days 17μ and 13μ , and after eight days 18μ and 15μ . During this period the nuclei presented various karyokinetic figures. In animals treated with quinine there were no multi-nuclear cells, all being oval, with a single nucleus and smaller than the corresponding cells in the control animals, the mean diameters being after three days 13μ and 10.5μ , after five days the same, and after eight days 14μ and 11μ . The cells were, moreover, more numerous than in the control observations. In the quinine-treated animals, the karyokinetic process commenced and finished earlier than in the others, the chromatin filaments being also less numerous but thicker. Altogether there was less inflammation with quinine than without; in short, without quinine there was Zenker's degeneration; with quinine, none.

—*Lancet*.

CHEST WOUNDS.—A case of stabbing, between the fourth and fifth ribs, in front of the anterior axillary line on the left side, was accompanied with localized emphysema. While there was evidence of sanguineous effusion in the pleural cavity, the bleeding was profuse externally.

There was slight dyspnoea upon lying down, which was relieved in the sitting posture. The wound was closed by adhesive plaster with a compress and bandage, and the patient recovered without any untoward symptom.

It has not been found necessary to use stitches in these wounds inflicted by the thrust of a knife blade, as the coaptation is effected by the above process, so as to hermetically close the opening in the chest.

In another case a stab was inflicted between the sixth and seventh ribs on the left side, near the margin of the scapula, from which blood and air escaped at each inspiration, with considerable accumulation of blood in the pleura, and hæmoptysis. The external wound was closed immediately after a gush of blood and air from the opening. The patient became more quiet afterwards. This case was accompanied with traumatic pneumonia and marked constitutional disturbance, but ultimately recovered.

A third case came under my observation in which a knife blade entered between the fifth and sixth ribs on the right side, penetrating the lungs and attended with the accumulation of blood in the pleural cavity. There was no very marked dyspnoea, and as the flow of blood externally gradually diminished with the dependent position of the wound, it was not thought that closure of the opening was indicated. Inflammatory symptoms soon developed, with subsequent adhesion of the pulmonary and parietal pleura. In the end, suppuration of the lung found its way through the external opening. A weak solution of carbolic acid was injected into the suppurating tract daily, and the healing process progressed favorably, so that there remained eventually but slight impairment of the lung from the injury.

The inference from these cases goes to prove that suppuration is more likely to occur when the incised wound is left open than when it is closed immediately and kept occluded.

A fourth case was seen some days after a stab had been inflicted between the seventh and eighth ribs, and there was a protrusion of a small globular mass of pulmonary tissue from the wound. As it had occurred shortly after the injury, and was tightly constricted by the margins of the wound in the thoracic wall, the neck of the hernial tumor was encircled

with an elastic ligature, as most likely to effect a prompt and safe detachment of the mass. In a few days it separated, and there was no further trouble with the case.—*Gaston, Jour. Am. Med. Assoc.*

SUSPENSION IN ATAXY.—I have thought it desirable in the further analysis of the cases to divide them according as they fell into one of the three groups or stages now generally recognized as belonging to tabes dorsalis. These are:

1. The pre-ataxic stage in which ataxy of movement is not present, or is only very slightly marked, but the existence of the disease is shown by the occurrence of more or fewer of the following symptoms: Loss of knee jerk or of other tendon reflexes, inequality of pupils, Argyll Robertson phenomenon, myosis, atrophy of optic discs, oculo-motor paralysis, Romberg's symptom, lightning pains, gastric crises, disorders of micturition, affections of common sensation, girdle pain, etc.

2. The ataxic stage, in which locomotor ataxy is a striking feature; and

3. The stage in which the patient is either unable to walk at all, or only with great difficulty, with the aid of others. I may state parenthetically that it is not meant to imply by the expression "stages" that the first must necessarily pass into the second stage, for many cases remain in the first stage and never develop marked ataxy. Of the twenty-four patients, twelve were in the pre-ataxic stage, and the following table gives the result with the duration of the disease in years:

Duration of disease.	No. of cases.	Result.
1 year 1	1	{ Good, but relapsed, improving again under a second course of treatment.
2 years 4	4	{ In one good, another improved, in two nil.
5 years 1	1	{ Good.
6 years 3	3	{ One improved, one better at first, but relapsed at once, and in the third improvement, but still under treatment.
10 years 1	1	{ Improved.
12 years 1	1	{ Nil.
20 years 1	1	{ Good; relapsed and improved again.

Total result: Good in four; two, however, relapsing and improving under second course; improvement in three; nil in four; one too soon to judge of the lasting result. Eleven were in the ataxic stage, and are arranged according to the duration of the disease.

Duration of disease.	No. of cases.	Result.
5 month s.... 1	1	{ Improved, but lost sight of.
2 years 2	2	{ One slight partial improvement; one nil.
4 years 2	2	{ One improved for eight months, then relapsed, and is again improving under treatment; one nil.
5 years 2	2	{ Nil, one good.
7 years 2	2	{ Two nil, one better for very short time.
8 years 1	1	{ Nil.
9-10 years 1	1	{ Slight improvement; still under treatment.

Total result: Good, one; improved, three; of whom one relapsed; slightly improved, one; nil, six.

—J. Michell Clarke, in *The Lancet*.

TREATMENT OF ABORTION.—As there is very little difference of opinion regarding the preventive treatment, it will not be mentioned, but only the management of cases in which the symptoms of abortion have actually presented themselves.

Rupture of the membranes and death of the embryo render abortion inevitable. If the hemorrhage has been slight, and there is reason to think that the ovum is still intact, a full dose of morphine is given and the patient is kept absolutely quiet in bed, hoping by these means to prevent further progress of the trouble. If it is certain that the patient is going to abort, and she is suffering from severe pain with a rigid condition of the cervix, 5 grains of hydrate of chloral and 10 grains of bromide of potassium are given every half hour until four doses have been administered. In addition, to guard against hemorrhage, and stimulate contractions of the uterus, a tampon is introduced into the vagina, as follows: The patient is put in Sim's position, the vagina is thoroughly douched with an antiseptic solution, iodoform gauze is passed as far as possible into the cervical canal, and packed around the cervix; the vagina is thoroughly filled with tampons that have been soaked in an antiseptic solution, preferably a saturated solution of boracic acid. As much of the fluid as possible is squeezed out of the tampons before they are inserted; but I always use them wet, as dry cotton will not hold blood. The tampon is allowed to remain in position for a few hours to twenty-four, depending upon the amount of pain, and when it is removed the abortion is, as a rule, found completed. If the tampon is not tolerated, dilatation of the os can frequently be assisted by hot antiseptic douches given at regular intervals.

If, as occurred in a case that has been cited, after giving the uterus a thorough chance, it is unable to empty itself, the cervix is dilated, with the fingers if possible, if not, by the use of dilators (never tents), and is then emptied of its contents. When a part of the products of conception are retained, and the uterus ceases to act, the remainder of its contents are removed, if possible, before the cervix contracts.

In removing anything from the uterine cavity, strict antiseptic precautions are taken, and an antiseptic intra-uterine douche is given after the organ has been entirely emptied.

When possible, everything is removed with the unaided finger, but if necessary, forceps and the dull curette are used. Nothing is grasped with the forceps unless the finger, at the same time, is on the object grasped, and then traction is only made after it has been positively determined that the uterine walls are not in the grasp of the forceps. After the uterus has been entirely emptied, and only then, ergot is given and continued for a week, for I think that Schroeder has conclusively shown that the contracted uterus does not absorb septic material nearly so readily as when relaxed. Lastly the patient is kept in bed until all vaginal discharge has ceased.

—Waldo, *Int. Jour. Surgery*.

DELIRIUM CORDIS OR TACHYCARDIA.—The case was presented by von Ranke, at Munich. The patient, a young girl of eleven years, whose father is perfectly healthy, and whose mother died in 1889 of an unknown heart-disease, is well developed, but somewhat anæmic, with slightly bluish cheeks, a sign so often indicative of cardiac disease. When presented, her heart was beating at a rate of 190 a minute, and the cardiac impulse could not only be felt at the thoracic wall of the left side, but also be very dis-

tinctly seen at a distance in the supraclavicular region of either side of the body. While the cardiac impulse was in this manner propagated at an equal rate to the subclavian arteries, it did not reach the radial arteries at its full speed. *On the contrary, the radial pulse showed only exactly half the number of cardiac contractions.*

The girl appeared well at ease when presented, but had been in a miserable condition when entering the hospital, two days previous. The heart was then beating at a rate of 220 per minute; there was considerable dyspnoea, angina-pectoris, anorexia, and even vomiting. These threatening symptoms all gradually disappeared after the enforcement of strict rest in bed, the application of an ice-bag over the cardiac region, and the internal use of digitalis.

The little patient has since her birth always been the subject of cardiac disturbances, and has had several acute exacerbations of the trouble. The records of the hospital show that the girl entered the institution once before, in 1887, with *not less than 240 heart-beats per minute*. While in 1887 neither structural changes nor a bruit could be detected, the present physical examination shows a very slight enlargement of the area of dullness toward the right, and an insignificant downward dislocation of the apex-beat. It also appears that there is a slight roughening of the cystolic heart sound. Outside of these comparatively trivial changes, nothing can be detected to account for the tempestuous action of the heart.

Delirium cordis is sometimes found as a transitory disturbance after considerable abuse of tobacco, and it sometimes attacks very nervous women; but the little patient subject to the rare disease does not know anything of the use of tobacco or abuse of alcohol, and she is anything else than of a nervous disposition, being quiet and gentle in a manner rarely found at her age. She—it may also be stated—has never had diphtheria, a disease which also sometimes, though rarely, is followed by delirium cordis, in consequence of a parietic condition of the pneumogastric nerve, brought about by degenerative processes of the nerve substance. The parietic conditions following diphtheria, formerly generally believed to be conditions of weakness only, in consequence of leucocythæmia, more than true paralyses, are, as has recently been shown, true parietic manifestations, dependent upon a degeneration of the nerve substance. If the vagus, after diphtheria, is degenerated, delirium cordis easily finds its explanation, the inhibitory nerve of the heart being parietic. In the case of the little patient, however, as reported above, there is nothing to show that the vagus is in such a condition, or to explain why it should be. The etiology, therefore, is completely dark. It is also a curious fact that the child is almost perfectly well at a very high rate of cardiac activity, and only becomes disturbed when the heart's action runs up to quite an exceptional speed.

—*Lancet-Clinic*.

ACTION OF NEW HYPNOTICS UPON DIGESTION.
—*Chloralamide*.—The result of the experiments showed that:

1. Large quantities retarded the digestion of fibrin in the ratio of the quantity employed.
2. Small quantities, for example, up to 0.02 gramme, did not have any marked influence either in accelerating or in delaying the digestion of fibrin.
3. Putrefaction was not retarded by either large or small quantities.

Paraldehyde.—The result of the experiments showed that:

a. Large quantities considerably accelerated the digestion of fibrin, and that the rate of this acceleration was distinctly in ratio with the quantity used.

b. Small quantities also increased, but to a less degree, the digestion of fibrin.

c. Putrefaction was presented by the larger quantities of paraldehyde, and was delayed by the smaller quantities.

Urethane.—The result of experiments, which were conducted in similar manner, showed that:

a. Strong solutions—that is, 0.5 gramme, 0.25 gramme, 0.175 gramme—delayed digestion; that the stronger the solution the greater was the delay.

b. Weak solutions—that is, 1, 2 and 3 milligrammes—neither delayed nor accelerated digestion.

c. Neither strong nor weak solutions retarded decomposition.

Sulphonal.—Similar-conducted experiments showed that:

a. Strong solutions, saturated or half saturated, considerably delayed digestion, and that the stronger the solution the greater was the retardation.

b. Weak solutions, such as $\frac{1}{10}$ or $\frac{1}{8}$ of a saturated solution, had little effect either in accelerating or delaying digestion, but when a solution of $\frac{1}{4}$ of a saturated solution was employed delay in digestion took place.

c. Strong or weak solutions had no marked effect in retarding putrefaction.—Gordon, *Brit. Med. Jour.*

GERMAN AND RUSSIAN NOTES.

HERMAN MARCUS, M.D.

SOZOJODOL PREPARATIONS.—*Acute Blenorrhœa*:

R.—Zinci sozodolici gr. xv—gr. xxxv.
Aque dest. 5vj—3ij.
Tr. laudani simpl. 5j—gr. xv.

Chronic Blenorrhœa:

R.—Zinci sozodolici gr. xx—xxx.
Bismuthi salicylici gr. xxx.
Aque dest. 5vj—3ij.

Catarrh of the Nasal Mucous Membrane:

R.—Zinci sozodolici gr. xv.
Glycerini,
Aque dest. āā 3iiss.
M.—S. Paint the parts with solution.

For Burns:

R.—Potassii sozodolici gr. xxx.
Vasellini. 3iiss—5v.

—*Wiener Klinische Wochenschrift.*

FOR STOMATITIS:

R.—Potassii chlor. 5j—gr. xv.
Decoct. chinæ 5vj—3ij.
Tr. cochleariæ 5vj—gr. xv.
Mel. rosat. 3iiss—gr. xxx.
M.—S. Gargle frequently.

—*Internat. Klin. Rundschau.*

FOR STOMATITIS AND DIFFICULT TEETHING OF CHILDREN:

1. Paint the gums with the following mixture:

R.—Cocainæ mur. gr. iss.
Sodii chlor. gr. xv.
Glycerini,
Aque dest. āā 3iiss.

2. Spray a boracic acid solution on the inflamed parts.

3. To prevent spasms give internally:

R.—Potassii brom. gr. xv.
Syr. alth. 5v.
Salep. gummos. 5j—3ij.
M.—S. Teaspoonful every hour.

—*Internat. Klin. Rundschau.*

SALIPYRINE.—Prof. Dr. von Hosengeil (Bonn, Germany) claims that the action of antipyrine in such cases of influenza which show no rise of temperature is that of a cardiac poison. Salicyl and quinine have also such action. By combining salicylic acid and antipyrine he claims to have found a preparation, which he names salipyrine, which has proven itself to be a most excellent specific anti-influenza remedy in just such cases. The dose he employs is from 15 to 30 grains.

—*Berliner Klinische Wochenschrift.*

NATRIUM CHLORO-BOROSUM.—Dr. Kettler (Berlin) speaks highly of sodium chloro-borosum as an internal antiseptic.

He says that 1 per cent. solutions of this salt are sufficient to destroy typhoid bacilli, and that a 5 per cent. solution will do the same with tubercle bacilli.

He uses the following formulæ:

In Typhoid Fever of Children:

R.—Sol. natr. chloro-boros. ... 5j, gr. viiss. 3iv, gr. iij.
Syr. simpl. ad 5iv, 3v, gr. iij.
M.—S. A dessertspoonful every two hours.

In Typhoid Fever of Adults:

R.—Sol natr. chloro-boros. ... 3ij; 3v, 3iij, 9iij.
Syr. rubi. ad 5vj, 5ij.
M.—S. A tablespoonful every hour or two.

For Bronchitis:

R.—Liq. natr. chloro-boros (15
per cent.) 3viiss.
Aque dest. 3ij, 3vj.
M.—S. Use externally. Inhale frequently.

—*Deutsche Medicinal Zeitung.*

BROMIDE OF ETHYL.—Dr. Tal. Donath claims to have discovered a remedy against epilepsy, which is far superior to any other preparation. Bromide of ethyl (C_2H_5Br) is the remedy spoken of. It being insoluble in water, he administers it in emulsion such as:

R.—Aethyleni brom. 3j, gr. xv.
Emuls. oleos. 3ij, 3j.
Ol. menth. pip. gtt. ij.
M.—S. For adults: take 30 drops in a half glass full of sugar water two to three times daily.

On the third day he increases the dose to 40 drops, on the sixth day to 50 drops, on the seventh day to 70 drops.

Donath has not administered any larger doses than 70 drops, which is equivalent to $4\frac{1}{2}$ grs. of bromide ethyl. In children of eight to ten years he begins with 10 to 20 drops. By gradually increasing the dose he prevents any ill effects which the remedy may have on the stomach. Should the stomach be irritated, he decreases the doses and adds gr. iss—gr. iij to above prescription.

Another way of administering this preparation is:

R.—Aethyleni brom.
Spt. vini rectificati. āā 3j, gr. xv.
Ol. menth. pip. gtt. ij.
M.—S. Five to fifteen drops in a little milk two to three times daily.

Or,

R.—Acthyleni brom gtt. iij.
 Ol. amygdal. dulc. gtt. vj.
 M.—Fiat caps. gelat. No. 1.
 S. Two to four capsules two to three times daily.

—*Pester Med. Chirurg. Presse.*

STRYCHNINE IN ALCOHOLISM.—Dr. Portugalon, Samara (Russia), says that strychnine is the specific remedy against alcoholism; he uses it as follows:

R.—Strychniæ nitr. gr. ix.
 Aquæ dest. 3iij-gr. vi.
 M.—S. Use hypodermically.

In the beginning one to two injections of gr. viiss daily, which may be raised to gr. xxxviiss daily. Ten to sixteen injections will be generally found sufficient. A little bromide of potassium may be administered at the same time.

He began in 1887 to use strychnine against alcoholism, and claims four hundred and fifty-five cures since then. A number of Russian physicians also report favorably upon this treatment.

Dr. Tergolski reported all cases of alcoholism treated in such manner as positively cured.

—*Deutsche Med. Wochenschrift.*

DEATH DUE TO INJECTION OF HYDRARGYRUM NITRICUM.—Dr. John Phillips reports the following case in the *Deutsche Medicinal Zeitung*:

He treated patient, who was married and twenty-five years old, for sterility and dysmenorrhœa. After three years she became pregnant, but, being separated from her husband, she injected a half-teaspoonful of a nitrate of mercury solution into her vagina, so as to induce abortion. Soon she complained of violent pains, besides vomiting a great deal. Morphine and cocaine were prescribed. The face appeared drawn to one side; temperature, 39° C. (102½° F.); pulse, 112. Stools often, and colored with blood; no control over bladder. The vagina appeared wounded, and, on washing it out, bloody shreds came away. Uterus was enlarged; the os soft and open. Carbonate of ammonia was used, but the patient died. Post-mortem showed bloody urine in the bladder, the blood came apparently from the kidneys; the vaginal mucous membrane was covered with a hard detritus; cervix normal; the decidua partially loosened from its adhesions. The uterus contained a ten-weeks-old foetus intact. The intestinal mucous membrane was black and softened superficially. The peritoneum showed the beginning of an inflammation. The mucous membrane of the stomach was normal.

Phillips claims that the peritonitis was due to the detritus which covered the vagina, and which must have been reabsorbed. During life the patient showed no signs of mercurial poisoning (salivation).

Medical News and Miscellany.

THE Annual Encampment of the Boys in Blue is held this week at Detroit.

GEORGIA has a law disqualifying any physician who is proved to drink to excess.

MR. A. FRANK RICHARDSON has brought the question of substitution prominently forward, in an address before the National Editorial Association at St. Paul.

At the Massachusetts State Farm, a woman died from drinking methyl alcohol, stolen from the paint shops.

At Mitchell, Indiana, several cases of insanity have developed among the converts of the Mount Ebal Shakers.

THE Missouri State Board of Health demands from the medical colleges three courses of lectures for the student after the session of 1891-92.

PROFESSOR BERGMANN and Dr. Hahn have been ordered to answer within twenty-four hours the charge of having inoculated pauper patients with cancerous matter.

SUED BY SIR MORELL MACKENZIE.—Sir Morell Mackenzie, the celebrated throat specialist of London, has brought suit for \$10,000 damages, for the alleged unauthorized use of his name, against the Soden Mineral Springs Company and the Eisner & Mendelson Company. An injunction has been asked for.

H. CROOKSHANK PACHA, Inspector-General of Prisons, Cairo, F.R.C.S. Edin., has received the assistance of the Khedive in his efforts to establish an asylum for criminals under fifteen years. On the occasion of his setting out for New York, where he is to be married on the 5th of next month, his Highness presented to Crookshank Pacha a magnificent "*collier de scarabées*," mounted in gold, as a wedding present for his fiancée.

THE Ospedale Maggiore at Milan has just received, from the Duchessa Eugenia Litta Bolognini, who recently lost her husband and her second son, a donation of 500,000 francs, the proceeds of the sale of her jewels. The special department of the hospital thus munificently endowed is that of the Children's "*Clinico-Chirurgico*," or ward for the surgical lesions of children, and is intended as a memorial to the young Duca Litta Bolognini, prematurely deceased.

THE Medical Examining Board of Virginia will hold its semi-annual session for the examination of applicants for license to practice medicine, surgery, etc., in Virginia, during the session of the Medical Society of Virginia in Lynchburg, Va., during October, 1891. Fuller notice will appear in our September number. In the meantime, for further information apply to the Secretary of the Board, Dr. Paulus A. Irving, of Farmville, Va., or the President, Dr. Hugh M. Taylor, of Richmond, Va.—*Va. Med. Monthly.*

In ever case of hysteria, whatever be the condition of the locality giving rise to the special symptoms, there is a pathological condition of the central cortical cells, and to these you must address your attention if you hope for success in the treatment. You cannot afford to scout the idea of disease simply because the peripheral lesion does not correspond to the symptoms existing. Disease just as important and far more troublesome is present, and will require the skill of the most expert for its mastery.

—*Lancet Clinic.*

CHOLERA is still spreading in Abyssinia, the disease making great progress at Massowah, where not only natives but some Europeans have been attacked. The heat is stated to be excessive. It is also alleged that some cases have occurred amongst pilgrims at Mecca, and that detention at Red Sea ports is already being arranged for pilgrims before returning to Egypt.

or passing up the Suez Canal. The occurrence of the disease at Aleppo has led to quarantine being imposed by the Austrian Government on all arrivals from Syrian ports between Karatash and Latakia, and the same regulation will apply to arrivals from Red Sea ports.

THE ÆSCULAPIAN MASONIC LODGE.—The Most Worshipful Grand Master has acceded to the prayer of the petitioners, and granted a warrant for the above lodge. The following are the officers designated: W. M., J. Brindley James, M.R.C.S., P.M.; S. W., F. Ernest Pocock, M.D., P.M.; J. W., Deputy Inspector-General, Belgrave Ninnis, M.D., P.M.; P.M. (acting), Lennox Browne, F.R.C.S. Edin., P.M.; Secretary, Thomas Dutton, M.D., P.M.—*Lancet*.

COMPARATIVE MORTALITY IN ENGLAND AND ITALY.—The gross population of England and Italy is about the same—namely, 30,000,000, and while the mortality during 1889 in the former was 511,000, in the latter during the same period it was 820,000. This gives a rate of 17.8 deaths per thousand for England, and 27.6 per thousand for Italy. Bad water and the absence of sanitary arrangements in the large towns are assigned as the causes of this high rate of mortality.

GOUT AND FRUIT EATING.—In the last number of his *Archives of Surgery* Mr. Jonathan Hutchinson says that he has for many years been in the habit of forbidding fruit to all patients who suffer from the tendency to gout. In every instance in which a total abstainer of long standing has come under his observation for any affection related to gout he has found, on inquiry, that the sufferer was a liberal fruit eater. Fruits are, of course, by no means all equally deleterious; cooked fruits, especially if eaten hot with added sugar, are the most injurious, the addition of cane to grape sugar adds much to the risk of disagreement. Fruit eaten raw and without the addition of sugar would appear to be comparatively safe. Natural instinct and dietetic tastes have already led the way in this direction, few wine drinkers take fruit or sweets to any extent, and Mr. Hutchinson suggests as a dietetic law that alcohol and fruit sugar ought never be taken together, and he believes that the children of those who in former generations have established a gouty constitution may, although themselves water drinkers, excite active gout by the use of fruit and sugar.—*Brit. Med. Jour.*

SABBATARIANISM IN EXCELSIS.—The new treasurer at St. Thomas' Hospital seems to be a man with very strict ideas on the subject of dominical repose. We hear that he has succeeded in putting a stop to the delightful clinical *matinées* with which Dr. Ord, among others, was in the habit of favoring senior students on the Sabbath, on the ground that to impart knowledge, even of such an essentially humanitarian kind on Sunday, was "highly improper." Evidently this official would never have consented to lend a hand to help an animal out of a ditch on that day. It is, however, to be hoped that he will know where to draw the line in this matter. He cannot very well forbid patients suffering on Sunday, neither can he, in the ordinary course of events, prevent surgical mishaps, so that it would be unfair to refer such applicants for relief to the following day. What excites one's surprise and disgust is that he should be enabled to interfere in matters not within his competence, and to enforce his own peculiar views on persons who should be outside and beyond his control.—*Med. Press.*

ANY squint or cast in the eye can be cured without the expense of going to a physician or an oculist. It is only necessary to get a pair of spectacles with plain glass in and to color the center of one of the lenses black. The eye will naturally make an effort to look straight ahead all the time, and after a few days the effort will be imperceptible. With a child a cure can be effected in a week, and with a grown person a month will suffice to remedy the worst case. Wearing smoked glasses is the best possible safeguard for weak eyes when in a strong light, and even these will help to get rid of a "cast" by strengthening the eyes and relieving them from unnecessary exertion.

—*Chicago Herald.*

THE SPREAD OF TUBERCULOSIS BY RAILWAYS.—The last number of the *Revue Scientifique* contains an account of some interesting researches by M. Prausnitz on the dissemination of tuberculosis by railways. He collected the dust from the carriages running between Berlin and Meran, a route much frequented by phthisical persons, and tested it by the inoculation of guinea-pigs. Microscopical examination revealed the fact that tubercle bacilli were present in two out of five samples of dust, and three out of four of the animals experimented upon developed tuberculosis as a consequence of the inoculation. From the slow evolution of the disease, M. Prausnitz infers that the bacilli were only present in small numbers, but this fact does not invalidate his conclusion that it is incumbent on railway companies to order the periodical cleansing and disinfection of their carriages, and especially of the rugs and carpets, since these are exposed to the expectoration of phthisical travelers. We should imagine, from our experience in this country, that a bacteriologist would find enough microbes of all kinds in the corners of one of our cushioned carriages to occupy his attention for the rest of his scientific life.—*Med. Press.*

AN Army Medical Board will be in session in New York City, N. Y., during October, 1891, for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the Board will make application to the Secretary of War, before September 15, 1891, for the necessary invitation, stating the date and place of birth, the place and state of permanent residence, the fact of American citizenship, the name of the medical college from whence they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates, based on personal knowledge, from at least two physicians of repute, as to professional standing, character, and moral habits. The candidate must be between twenty-one and twenty-eight years of age, and a graduate from a regular medical college, as evidence of which his diploma must be submitted to the Board.

Further information regarding the examinations may be obtained by addressing the Surgeon General U. S. Army, Washington, D. C.

C. SUTHERLAND,
Surgeon General U. S. Army.

THE POISON-MAIDENS OF THE ANCIENT INDIANS.—"Puellæ veneficæ," or poison-maidens, constituted a feature peculiar to the ancient Hindoo civilization— young women, that is to say, who had been inured to the ingestion of poison, and who had power to kill all who came in contact with them. To which of the

two main classes into which Susruta divides poisons—the “venena stabilia” (vegetable and mineral) and “venena mobilia” (animal) poisons—these women owed their fatal gift, has not been made clear. Susruta, however, has no doubt of the reality of that gift. Steinschneider, in his “Toxicologische Schriften der Araber bis Ende des xiiiten Jahr-hundert” (Toxicological writings of the Arabs up to the close of the thirteenth century), adduces from the Hawi of Rhazes a passage to the following effect: “Æthiopes quando volunt occidere principes, nutriunt puellas veneno . . . et earum saliva periit gallinas et alia animalia, et muscæ fugiunt eas.” (When the Æthiopians [Indians] want to kill their chiefs they feed girls with poison . . . and the saliva of these is fatal to hens and other animals, and flies shun them). The whole subject forms a curious page in the history of medicine.

WEEKLY Report of Interments in Philadelphia, from July 25 to August 1, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Alcoholism.....	1			Fever, typhoid.....	5	5	
Apoplexy.....	2			Gangrene.....	1		
Bright's disease.....	6	1		Inanition.....			18
Burns and scalds.....	1			Inflammation bladder.....	1		
Cancer.....	16			“ brain.....	4	11	
Caries of vertebra.....	1			“ bronchi.....	2	4	
Casualties.....	4	3		“ kidneys.....	6	1	
Cerebro-spinal meningitis.....	1			“ larynx.....	1		
Congestion of the brain.....	4			“ heart.....	2		
“ lungs.....	2			“ lungs.....	7	9	
Cholera infantum.....	81			“ peritoneum.....	5		
Cholera morbus.....	2	1		“ s. & bowels.....	9	4	
Cirrhosis of the liver.....	3			Intussusception.....			2
Colic.....	31	6		Malformation.....	1		
Consumption of the lungs.....				Mania a-potu.....			31
“ bowels.....	2	16		Marasmus.....			
Convulsions.....	2	2		Measles.....	1		
Croup.....	10			Obstruction of the bowels.....	1		
Cyanosis.....	2	3		Old age.....			9
Debility.....	1	4		Paralysis.....	3		
Diarrhœa.....	9			Pyæmia.....	1		
Diphtheria.....	19	2		Rheumatism.....	1		
Disease of the heart.....				Suicide.....			2
“ spine.....	1			Sunstroke.....			1
Drowned.....	1			Syphilis.....	1		
Dropsy.....	3			Teething.....			1
Dysentery.....	1			Tetanus.....			
Epilepsy.....	1			Tumor.....			1
Enlargement of the liver.....	1			Ulceration of the stomach.....	4		
“ spleen.....	1			Uræmia.....			7
Fatty degeneration of the heart.....				Whooping cough.....			
Fever, scarlet.....	4			Total.....	159	268	

HEALTH OF NEW YORK DURING JUNE, 1891.—Monthly reports from one hundred and thirty-eight cities, villages, and towns, aggregating a population of 4,305,000, show a total mortality of 7,893 deaths during the month of June, making a death-rate of 22.78 per thousand per annum. The entire reported mortality for the State is 9,321, or 310 deaths daily; in May there were 330 daily, in April 463; in June, 1890, there were 291. The excess over the mortality of a year ago is in acute respiratory diseases, and diseases of the digestive, circulatory, and nervous systems; these have been found to represent the mortality from epidemic influenza, and it is probable that 500 deaths were from this cause. The number of deaths from acute respiratory diseases was 1,098, which is about half that of May. There were 978 deaths from consumption (1,234 in May), or 10.5 per cent. of the total mortality; this differs but little from a year ago. Zymotic diseases have caused fewer deaths than in June, 1890, the proportion to the total mortality being 186.80 per thousand now and 217.70 then. The reported deaths from diarrhœa are 20 per cent. less than last June, and from diphtheria the rate is lower; scarlet fever is the only zymotic disease which shows any material increase, having

caused 207 deaths. The infant mortality is somewhat less, but compared with the preceding month of May is considerable higher, on account of the large increase in deaths from diarrhœal diseases. The death-rate for the State is 20.20 per thousand population per annum.

THE CHILDREN'S ARCHBISHOP.—One of the younger societies which has displayed the most astonishing vitality, as measured by the growth of its subscriptions and branches, is the Society for the Prevention of Cruelty to Children. Unlike most other societies, it has a soul, and that soul is Benjamin Waugh, the editor of the *Sunday Magazine*. Mr. Waugh is a veritable children's archbishop of all England, and not for England only but for the whole of the three kingdoms. Wherever a tortured child moans in a garret or in cellar, there Mr. Waugh appears as a deliverer and avenger. He has now sixty aid committees in England, two in Wales and three in Ireland. The annual income of the society has risen from \$44,000 to nearly \$100,000, but it is unable to cope with the whole field for lack of funds. It ought to have a revenue of \$250,000 per annum, and no doubt before long Mr. Waugh will raise that and more also. Last month he secured the quasi-conditional support of Mr. Herbert Spencer, who has publicly confessed that:

“To bring punishment on brutal and negligent parents seems, on the whole, a beneficial function, for though by protecting the children of bad parents (who are on the average of cases themselves bad), there is some interference with the survival of the fittest, yet it is a defensible conclusion that in the social state philanthropic feeling may, to this extent, mitigate the rigor of the natural law.”

To have extorted such an admission from the great apostle of the doctrine, “let the devil take the hindermost,” justifies a belief that Mr. Waugh will raise his \$250,000 per annum. It is much easier to take a collection than to convert the very pope of laissez faire.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending July 25, 1891.

- FIELD, JAMES G., Assistant-Surgeon. Ordered to special duty in the Bureau of Medicine and Surgery.
- HOPE, JAMES S., Assistant-Surgeon. Ordered to the R. S. “Franklin.”
- MORRIS, LEWIS, Assistant-Surgeon. Ordered to the “Ajax” and other monitors, Richmond, Va.
- KENEY, JAMES F., Assistant-Surgeon. Promoted to Passed Assistant-Surgeon.

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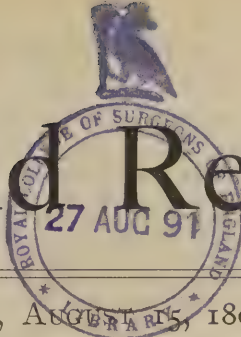
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Original Articles.

CLIMATIC INFLUENCES AS RELATED TO INEBRIETY.¹

By E. P. THWING, M.D.,
BROOKLYN, N. Y.

CLIMATOLOGY is a fruitful study. It is vitally related to agriculture, sanitary science, engineering, mechanical arts; also to psychology, physiology, and medicine. It is an old study. This department of physics received attention from Hippocrates and Theophrastus, centuries before Christ. They noticed the instabilities of the elements and the influence they had on the nutritive and nervous functions of organic life. They treated these atmospheric phenomena with more sobriety of discussion than did Chaldean scholars before them, who—careful in studying the heavens—failed to see the kinship of solar energy and terrestrial magnetism. Not till within the last eighty years, however, have electric disturbances, variations of temperature, diurnal currents, tidal forces, and other dynamics of climate, been so fully investigated as to found a science of meteorology, that is, a science of weather and climate. It was not known to these ancient sages that the earth is an engine, the sun a furnace, the tropics a boiler, and the poles a condenser.

From 1817, when Humboldt's work on Isothermal Lines was published, to the present time, physicists have widened the field, perfected their appliances and so have enriched the science of climatology, each in his special line of observation. For example, Professor Draper, of New York, shows how climate has changed not only complexion, but cranial development. Austere conditions furnish a ruder, baser type, while a more genial clime produces a finer grade of

skulls, with brains to match, inasmuch as social and intellectual development depends on exemption from the exacting demands of either extreme of climate. Uniformity of climate tends to create homogeneity of national character. This means immobility, as among Asiatic races, unless higher factors modify. As science provides improved means of locomotion, man's migratory tastes are quickened, and his intellectual life. Climate itself may be modified by civilization, as when vast forests are removed along the water sheds of a continent, or inland seas created, as is proposed in the case of extensive deserts. This fact shows that Montesquieu's epigram is to be taken with some allowance, "the first of all empires is the empire of climate." Professor Dunbar, of Aberdeen University, contrasts the munificence of nature in one zone, and the temptations to indolence and self indulgence thus created, with the rigor of other climes where her gifts are doled out with a frugal hand, and personal effort stimulated. Milton and Young among the poets, and Descartes among the philosophers, have hinted at the modifying influence of climate on character. Referring to William of Orange, De Foe says that he was "too great a genius for so damp a soil." Disraeli, however, reckons these theories among the imbecilities of great men, and makes education and legislation so potent as to practically exclude physical factors entirely, which ground is contradicted by history and experience.

What temperament is to a man, that is the angle at which he looks at things, climate may be said to be a country. In one sense, temperament is one's fate and climate is a country's fate. The slant of solar rays, varying from the vertical in equatorial regions, to the angle which makes Arctic frost at the poles, imposes a destiny on the races of men. I have realized this in a recent journey of 30,000 miles to and from India by the way of China and Japan. The immobility and social petrification, the torpid and tepid life of the average Asiatic is, in part, the pro-

¹Read at the Medical Congress, Staten Island, July 15, 1891.

duct of physical factors. Inebriety is not common there as with us. As Canon Farrar says, we found India sober and made it drunken, we have belted the globe with drunkenness, sending from English and American ports cargoes of that which has cursed our own lands to ruin the tribes of Africa and Asia.

Before western civilization gained a foothold, Buddhism was a repressive influence and so was Islam with its law of total abstinence. Conditions are rapidly changing. Potent as are climatic and religious agencies, appetite and example are equally so. Man is fond of stimulants, the world over. The tinder only needs the torch. When a Moslem falls a victim to the liquor brought by Christian nations, you may hear it said: "He has left Mahomet and gone over to *Jesus!*" Thus is Christianity blackened and the sacred name of its founder defiled by associating the rum traffic with the religion of our land. Heathen compare their system to our own and not to our advantage.

The United States has been called by Dr. Beard "The Intemperate Belt." Here is the birth place of the disease Inebriety, as distinct from the habit of drunkenness. Here this malady has developed sooner and more rapidly than elsewhere. Here it was first studied. Here Inebriate asylums were first established. Here total abstinence societies started, for it was seen that here, at last, no half way treatment availed. No moderate use of liquors is wise where climatic influences have so intensified the feverish rush of life to which racial, social, and political factors contribute. First, notice the extremes of thermal changes in our American climate as related to this heightened nerve sensibility; and secondly, the influence of the peculiarly dry, electric quality of our atmosphere upon the nervous system of our people.

1. The great extreme in thermal changes. I have seen in New England a range of 125° , from 25° below zero to 100° above, in the shade. The year's record at Minnesota reads from 39° below to 99° above, a range of 138° . Even within twenty-four hours, and in balmy regions like Florida, the glass has shown a leap from torrid heat to frosty chill.

No wonder, then, that the greatest fear of some is the atmosphere! They dread to face alike Arctic rigor or Tropic fire, and get in the habit of staying indoors even in exquisite weather of June and October. Rooms are made small, with double windows and list on the doors. In winter a roaring fire is in the cellar; another in the grate. The difference between this hot, dry, devitalized air within and the wintry air without is sometimes 80° , on an average 60° , while the difference of temperature inside and outside an English home is 20° . The relation of this to the nervousness of the people is apparent.

2. The uniform brightness of American skies favors evaporation. The Yankee is not plump and ruddy like his moist, solid British brother, but lean, angular, wiry, with a dry, electrical skin. He lights the gas with his fingers, and foretells the coming storm by his neuralgic bones. Hourly observations were made for five years with Capt. Catlin, U. S. A., a sufferer from traumatic neuralgia, in care of Dr. Mitchell. The relation of these prognostic pains to barometric depression and to the earth's magnetism was certified beyond doubt, and was reported to the National Academy of Science, 1879. Even animals in the Sacramento Valley and on the Pacific coast are unusually irritable while the north desert winds are blowing and while electricity, seeking equilibrium, is going to and from the earth. Fruits, foliage, and grass towards the wind shrivel. Jets of lightning

appear on the rocks and sometimes on one's walking stick. The heart beats faster in New York than in London, and faster still in the Western altitudes. "I can do more here," said Newman Hall, of London; "I feel it to my finger's end." Climate helps to put a tremendous strain on heart and brain. Talmage truly says, "We are born in a hurry; live in a hurry; die in a hurry, and are driven to Greenwood on a trot!" The perpetual play of this accelerated nervous energy is exhausting. As a result, a neurotic diathesis is created, and men and women on the verge of physical bankruptcy cannot afford to add the stimulus of intoxicants.

Climatologists speak strongly, as when Dr. Coan says that the Gulf Stream gave Europe her civilization, and the occlusion of the Pacific, shutting out the cold of Arctic seas, made Polynesian character what it is; and Buckle, in his "History of Civilization," who says that climatic influences form a definite part of the anatomy of national life, yet their conclusions are justified by facts.

The limit allowed for this paper is reached, but a closing suggestion as to its bearing upon the subject of crime may be added.

In the study of criminal anthropology we now have a new school, of which Dr. Lombroso, Professor of Medical Jurisprudence, is leader, which makes crime to be the accumulated result of the criminal's physical and mental constitution and environment. He and his colleagues have abundant materials in Italy, for there are ten times as many assassinations there as in France. They have been very minute and patient in studying the material and mental increments of crime. Nothing is overlooked. Eyes, ears, hands, feet, internal and external organs are examined. Abnormalities of vision, taste, and other perceptions are noted. Asymmetries of person are detected by anthropometric examination.

But what concerns us most just now is this: while the electrical experiments of Du Bois Raymond prove a dulled tactile sensibility in the average criminal, they reveal the fact that "he is much more sensitive to meteorological influences." This may be supposed to be true to a marked degree in the case of inebriates. I would therefore commend the subject of climatology, as related to the neurotic diathesis, to the studious attention of the members of this congress.

THE PHYSIOLOGICAL RELATIONS OF ALCOHOL TO FOOD.¹

By ELISHA CHENERY, M.D.,
BOSTON, MASS.

Author of "Alcohol Inside Out."

EVIDENCES are abundant that alcohol is not the tree of life, with healing leaves and foodful fruit. The four winds of heaven are against it. Clergymen, philanthropists, women—lay hold on its top and exert themselves to pull it out of the earth. Economists dig about it and loosen the surface roots. Scientists are putting in their work. They dig down and strike at the tap-root—the old, hard-grown, and many-branched tap-root—of its supposed necessity.

An eminent manufacturing chemist has already severed the branch which runs down into his business, asserting that manufacturers do not need it—that the world will lose nothing by losing it. To this work now come the physicians from every direction, axe in hand. Would that they all came, like

¹ An essay read at the National Medical Congress, at Staten Island, N. Y., July 15, 1891.

Hiawatha from his visit to Minnehaha, measuring a mile at every step. Most of them who have carefully considered the subject, accept that liquor is not an essential to the sick-room; rather, that the practitioner who leaves it alone has best success and is more safely trusted.

It is my privilege to-day to call your attention to that branch of this tap-root which runs down into food and drink. And, while I make no pretention to novelty of matter, I will try to present what we have, so as to make you see that we proceed with reason when we chop this root clean off.

All living beings—animal, vegetable—eat, drink, breathe, sleep.

The grass pushes its blades into the sun-lit atmosphere. Trees unfold their leaves to light, wind, and storm; while their roots hold them in place, and their countless absorbing points drink in the moisture and eat the nourishment in the soil beneath.

In making animals, the Creator worked on the same plan, only with higher art. He employed two thousand square feet of the leaf-surface, rolling it into little cells, and put them into the human chest; and then, not to depend on uncertain skies or run the risk of calms, he provided that there should go down upon them warm, moist breezes day and night; and, that his creature might go to and fro in the earth, he discarded the tree-roots, but made use of the millions of absorbing points, distributing them up and down the alimentary canal—a canal thirty feet long and of variable width—supplying them with concentrated food already elaborated for them to take up.

Now, I had an uncle who made a fortune from an apple orchard. He never poured cider on the roots of the trees, though that cider originated from the apples, and might be rich in albumen from the wormy ones. But he did dress the trees with manure, and gave them water as they needed. For such reasonable care he was rewarded with abundant fruit.

Has any one a plant, valued almost as an only son, who is foolish enough to break bottles of beer, wine, or whiskey about it? Should this be done, the fig-tree by the wayside, with the curse upon it, would illustrate the mistake. Why, then, wet down this higher organism with such unnatural fluid? Can it quench thirst or dissolve nutritious substances better than water? Nay, verily, water—water with the acids and alkalies of the body—is the universal solvent of the body. There is nothing alcohol can do but oppose and hinder, since it is in direct antagonism to the various elaborating ferments. Therefore, as a fluid for the body it is not needed; its use is positively harmful.

Now, as to its food relations to the semi-solids and solids of the body. Long since we accepted the idea that the body is material, and is built up and repaired by material of a similar kind, like any other material structure. Hence, to know what is required to nourish the body we must take it to pieces and ascertain what it is composed of. So we put it into the crucible.

In doing so, we must first get the fact that animal or physiological chemistry has to do very little with ultimate chemical simples. It deals, rather, with certain of their combinations or what are called proximate principles. It is the special office of the plant-world to work on and select the elementary simples, and organize them into these proximate principles, ready for the animal's use. Thus we have the philosophy of the order of nature in creating the vegetable kingdom first.

On looking into the crucible we see some fourteen different proximate principles, all of which exhibit the following characters, which absolutely differentiate them from anything in the shape of alcohol.

They contain nitrogen, alcohol has none.

They rotate the polarized ray to the left.

They cannot be crystallized.

They can be coagulated, after which they cannot be restored.

They differ in consistency in the different parts where they are found.

They excite catalysis—a special chemical change—among themselves, and with other similar substances.

They putrify, and, in so doing, set up fermentation in all other substances containing sugar and water.

Moreover, the body cannot be sustained by non-nitrogenous compounds; the appetite will clog; what is eaten will not digest, and starvation follow.

There is therefore no difficulty in comprehending that alcohol cannot supply the place of any of these proximate principles, and in relation to them must be absolutely excluded as a food, as having no nutritive qualities.

The crucible contains various mineral compounds. But does any one require that. I stand here and urge that alcohol is not lime, or soda, or potassa, or magnesia, or iron, or any of their compounds, and therefore, cannot be fed as their substitutes? Yet the mistake has been frequently made of feeding it to child-bearing women, who were weak, and whose teeth were being taken down to supply bony material for their growing children, instead of giving these mothers real bone making food.

Once more, in the crucibles there are two substances corresponding with alcohol in that they contain carbon, though they differ from it in all other particulars. They are the fats and sugars. With them I put starch; for, though it is not, as such, a principle of the human organism, it is intended for use by the provision made for its rapid conversion into sugar in the alimentary tract. Starch is the storage-form of food in the plant-world, composing as it does the larger part of the bulk of grains, and is converted into sugar at the check to feed the developing germ. It would not answer for storage-food in the animal. Here fat, having five times its potentiality, takes its place.

I will not afflict you with an attempt to show what are the complex evolutions of fats in the body. I will rather make a few statements touching this whole class of the carbonaceous, non-nitrogenous compounds.

Taken into the body they are broken up.

They lose their characters and disappear in the tissues, and finally reappear in other forms.

Through all their course they perform their work without injury and without disturbance to the organism, and their products can be recovered.

Not so with alcohol. It irritates and deranges the whole body. It diffuses every where as alcohol, remaining unchanged for several days—a hundred and twenty-six hours, Parkes and Wollowicz—escaping as alcohol from every possible outlet. No change is known to take place in it. But about two-thirds of the amount taken eludes our present means for its recovery. But to assume that this lost portion, simply because it is lost, is converted and serves any useful end in the body, is as irrational as it would be for me, because I have lost my knife, to assume that any one of you has stolen it, notwithstanding there is a hole in my pocket. In my book, "Alcohol Inside Out," I have shown, by many evidences, the great

probability that it escapes by exhalation, as ether and like substances do.

That it escaped unchanged and in totality came to be the belief of Lallemand and his able associates; a belief not yet shown to be false. They entered upon their experiments under the common notion that it was oxidized. They sought for the products of this oxidation, but did not find them.

Now, it may be remembered that alcohol is the first degree of oxidation of the radical, ethyl; that aldehyde is the second; and acetic acid, the third, beyond which there is only decomposition.

Distrusting their tests in not detecting the aldehyde or the vinegar, these Frenchmen introduced these substances into the system, and found no trouble in detecting them. This led them to conclude that alcohol is not changed in the body.

There is another mode of oxidation alcohol might undergo—suddenly, passing into carbonic acid and water. This would develop much carbonic acid and much heat. As a matter of fact both the carbonic acid and the temperature are diminished, and the more, the more is taken.

This, then, makes a clean cut of this root. Do I hear some one say, "There is a little bark yet holding?" It is the theory that alcohol conserves the tissues and so acts, indirectly, the purpose of food. Now, this theory entirely overlooks the functions of the blood corpuscles and the action of alcohol on them. Attention right here will show the absolute absurdity of such a chimerical notion.¹ Alcohol simply obstructs the elimination of the waste.

But there is another way to apply the axe to this root. It is as follows: The body may be regarded, as in fact it is, as a mass of cells, some of which have seen their day, gone through their changes, filled with solid matter, and gone to rest. They constitute the solid part of the body and are practically dead. The rest are either forming cells or protoplasm, and exist as soft, shapeless, albuminous masses, endowed with life and activity, and are characterized by containing nitrogen. Here ply the shuttles that weave the tissues. If we adopt the adage, "Without nitrogen, no nourishment," then alcohol can not act as food here; it opposes albumen, shrinks the cells, hardens the protoplasm, and arrests the vital phenomena. A lecturer threw upon the screen the micro-organisms in a drop of water to the astonishment of his audience. Then, on the slide, he put a minute portion of whiskey. Instantly it put its quietus on all that swarming life. About to make his point, a voice from the rear shouted out, "I'll never take another drink of water without a drop of whiskey in it." Just so it puts its quietus on the swarming life at the fountain head of the tissues and shuts down their various looms. So, gin, daily given to a pup from its birth, till the period of growth is over, results in a dot of a dog. Here is the fountain of bad heredity. Here is the slaughter of embryonic innocence and stunted infantile life. Here is given the Circean touch. Here spring the degenerations of manhood. Here the young toper's tissues become dry, hard, inelastic, and creak with the decrepitude of age. In every sense—in nature and in action—alcohol is foreign and inimical to the human frame.

Such a food—such nourishment—we do not want. Hence we cut and free this root, and shout to the friends at the top—*pull away!*

ALCOHOLISM AND HEREDITY.

By J. A. D'ARMAND, M.D.,
DAVENPORT, IOWA.

THE medical profession has for years been as much at sea, and as wildly influenced by personal prejudice, as other people, concerning the various politico-social questions relating to alcohol. Complex questions involving not only the betterment of the race, but also granting to each humble citizen of a republic the fullest measure of freedom, find many and various solutions, even at the hands of men who honestly endeavor to lay prejudice aside and work with the earnest, honest hope of securing the greatest good to the greatest number.

In order that the very difficult subject of inebriety might be the better handled, hosts of patient investigators have studied the effects of alcohol on the organism in health and disease; on the animals; on every organ of the human body; on the mature adult, and on the infant at the breast. This study, so praiseworthy in its design, and so fraught with good results in its practical application, has led to theories as multitudinous as they are wild. The widest extremes are made to meet, and the oil of speculation is made to mix with the muddy water of doubt. That such a condition of affairs should come about is not surprising, for it is true of all the investigations of great questions that bushels of chaff are garnered while only grains of truth are winnowed with patient toil and vexatious delays.

With the politico-social questions which agitate communities and States we, as medical men, have only to do as good citizens. With the medico-legal aspect of the questions relating to alcohol, our position as disinterested investigators, and as the recognized authorities, we should formulate theories and promulgate opinions with that care which is necessary in order that the confidence of those who look to us for truth may not be shaken. Enthusiasm, like might, cannot make right. Truth is, and must be, eternal, and the mistakes of to-day are corrected to-morrow in every branch of human work and human labor.

One of the latest theories concerning the great question of alcohol refers to the hereditary effects; and it is to this special point that brief reference will here be made. In studying the effects of alcohol on the human family, some investigators have observed a marked tendency to certain peculiar idiosyncrasies or dispositions in the children of alcohol-using parents. To such an extent have some of these traits been remarked that the theory has been advanced that the offspring of alcohol-abusing parents do, with sufficient regularity to establish a rule, inherit minds deficient in certain essential particulars, so that they are rendered, without any outside influence, unable to resist certain impulses reputed to be under the control of the will; or they are, in short, not capable of resisting impulses which are, by common consent, regarded as very bad. This is a most pernicious theory, and it is to be hoped, for the good of future generations, that it never gets beyond the pale of theory. Every theory which tends to injure society and to block the wheels of progress should be promulgated with hesitation and accepted with many misgivings, if at all. Every good citizen who cares for the welfare of his kind, who loves his home and would guard it from scoundrels and law-breakers, must hope that this new theory is not true. Law-abiding people will see in this new theory a loophole of escape for all the dark-lantern brigands who rob

¹ See this elaborated in my book, "Alcohol Inside Out." Sent by mail for \$1; also my Essay, "Does Alcohol Conserve Tissue." Sent for one stamp.

because it is easier than honest labor, and who murder because it is the shortest cut to liberty. Any one who has had an opportunity to study the rosters of jails and police stations will have learned that intemperance is accountable for a very large proportion of commitments. The new theory says, in effect, that very many of these people were born deficient in the mental ability to govern their appetites, and, furthermore, that crimes committed while under the influence of liquor are not the acts of sane persons at all.

The criminal laws are based on the very excellent principle that a "man who commits a murder when he is drunk shall be hanged when he is sober." But if the man can't help committing the crime, and can't help becoming intoxicated, manifestly it is wrong to punish him for the commission of an act he was powerless to avoid. The new theory takes the ground that there is a deficiency of nervous structure which renders the offspring of drinkers unsound and unequally balanced mentally. It has long been recognized as a fact that there often is a peculiar tendency in some families whereby the children all possess an inordinate desire for drink when they reach the stature of the average bar. It generally is true of these families that the *pater familias* has a fine appetite for alcoholics, of immaterial brand. If the father was a drinking man, the theory volunteers the conclusion that there is a nervous insufficiency in the make-up of the children. This is a theory, and all the fondling it has received from men whose business interests or fanciful notions have influenced their devotion has not removed it one step from the basis of theory, pure and simple, and improbable as well. If it were a fact that a child begotten by a father whose system was soaked with alcohol would inherit a mentality so deficient in one regard, why is it that the form of evil doing takes such various forms? One child of inebriate parents will be a drunkard, another a burglar, a third a tramp, and so on. This peculiarity is based on the explanation that the ability to choose right from wrong is not there. Now, if this were true, why does it happen that the children of inebriates who receive the benefit of good schools and the home influence that marks refinement and civilization are not more liable than other children to become drunkards? We all have seen the sons of first-class citizens, parents who never drink, yet their offspring appear to improve every opportunity to become sots.

He who starts out to account for the drunkenness of the day by saying it is due to an inability to resist, offers a poor apology for non resistance. There can be no absolute rule in these cases; but it is a matter of common observation that children who are reared in ignorance, poverty, and neglect make nine-tenths of the drunkards. Drinkers commit most of the crimes wherein life is jeopardized. These being facts, why not attribute drunkenness to the failure to develop the nobler parts of the children's minds rather than to attribute their shortcomings to a deficient mind?

Mental alienists are well aware of the fact that a mind unduly developed is most likely to show signs of unreliability sooner or later. Inventors are very liable eventually to turn their attention to perpetual motion, or a similar *ignis-fatuus*. The greatest bores of the age are the men who have a single scheme whereby impossible things may be accomplished by short-cut methods. The mind is a complex machine, and no part of it can be run while the rest lies idle

without the value and usefulness of the whole being jeopardized.

Why should alcohol have such an effect on the offspring? Are there not, even now, many physicians who have made the matter a study who aver—wrongfully, however—that the liberal use of alcoholics by nursing mothers will not effect deleteriously the nursling? This fact would seem most natural when we take into consideration that the young and growing organism must receive much of the inhibited alcohol; but the results of observations have not been so uniformly marked as to challenge attention.

Following out this line of reasoning, why are not the peculiarities of systemic diseases more frequently marked in the offspring of parents suffering therefrom at the time of conception. Some years ago a case came to my notice that would seem to suit this theory. A man of fifty years, who had been an invalid from rheumatism for years, became helpless. He could not turn over in bed, nor feed himself. In fact, he could lie only on his back, with his knees drawn up and arms at right angles at the elbows. In this condition he remained for more than a year, and finally died. A few months after his death his wife gave birth to a child who is to-day a healthy youth. The wife and mother is a woman above reproach. Why hadn't that child rheumatism, or other bodily or mental defect?

A man eats opium for years; his system becomes shattered; he is a shadow of his former self; and yet his children do not have a predilection for an opiate bill of fare. So it is with chloral, and, so far as my observation goes, all the other drugs that men use to excess. Look at the human pigs who chew tobacco. Do their offspring inherit an uncontrollable appetite for the nasty weed? Thank the Lord, no! And yet one would suppose that if filthy habits could be passed down, this nastiest of the vile would get there surely.

Why people drink, and how the habit is formed, will find several strides toward solution to the reader if he will but go into any of the beautifully-lighted saloons of an evening. He will there find gamblers, whose love of excitement, aided by an occasional glass, keeps them happy. He will find workingmen, who are spending their hard-earned cash in drink, the while talking of the strike that is to make more drink possible but less bread probable. He will find the "Chollies" and the "old fells," who form the masculine *creme de la creme* of polite society, as viewed from a rich paternal bank account. These youths are taking fine drinks for no reason under the sun, unless it be to give a one-of-the-boys look to a character which otherwise would be decidedly doughy. You will find there men who drink to keep warm in winter and cool in summer; who drink to forget sorrow, to drown grief, to celebrate an event, or banish a thought.

But you never will learn all the reasons why men drink. Intemperance, in fact, is a vice, and as such it is a

"——monster of such hideous mien,
That to be hated needs but to be seen;
But seen too oft, familiar with its face,
We first endure, then pity, then embrace."

Drunkenness is a habit, and, as such, is cultivated. While there may be, and are, cases wherein men and women have naturally an uncontrollable desire for drink, yet these are the exceptions, and they cannot even generally trace the cause to an ancestry of drunkenness. The appetite for liquor is cultivated, for not one in ten of those who are abusers of alco-

holics cares for the taste of liquor—it is the effect they are after. It is the boozy feeling, in which all is peace and happiness, that they are after, and they find it. No doubt many men are made bold by drink; but to say that a man who takes liquor in order to translate himself into a condition of mental lethargy is insane, is to deny to the man reasoning powers. The man who drinks does it for a purpose. Men do not drink by accident. When a man can reason that whiskey will befuddle him into happiness he is not insane clear through. If he drinks to brace up his courage, he must reason out the act. Because persistent devotion to drink finally renders him powerless to stop, does not disprove the fact that there was a time when vigorous measures would have broken a chain once made of straw, but now is of strongest iron.

Suppose that this theory is true. Suppose that the children are unable to control their appetites, and are not able to distinguish right from wrong. Then we might as well begin shaking hands with our friends, for lots of them will be in the mad house very soon. If they may inherit the mental weakness of not being able to keep step with morality and decency, how are we going to know that the time has not arrived for their life imprisonment to begin? And, by the way, it is not amiss to observe that it is largely the proprietors of "retreats" who have discovered this new theory of hereditary lameress from alcohol.

If a man is not able to control his appetite, would it not be best to shut him up while he lives? or would you let him run until he has filled some citizen full of cold lead, and then shut him up?

But, says the apologist, if you treat the head of the family as a criminal, look at the stigma you put on the children, who, even if educated by the State, and made good citizens, will ever have to bear the reproach of having had an ancestry that did time in durance vile. But would not even that stigma be better than an infancy, youth, and adolescence of ignorance, deprivation, and want, with little or no chance for place in the great race of life? Would it not render the coming crop of helpless humanity less? In doing that it would at least decimate the school where ignorance and crime are teachers. Of course, these retreats where whiskey is pumped out of a man and aversion pumped in, will cut no figure in this case. If a man's system is defective, he surely can't be helped any. You might as well talk of putting a new liver into a man as to correct a defect caused by an atrophied nerve center. The leopard may change his spots in Barnum's hands, but the retreats can't do the work as yet. All this talk of mental unaccountability is bosh when applied to drunkards in general. Men who drink know perfectly well what they are doing, and it will be a cold day for good government when the scope of sympathy is extended so as to include the wretches whose excuse for wrong-doing is nothing more rational than that they were drunk. Punish a man who gets drunk. Put him in the work-house. Make him work. Make him learn in the hard work-shop of painful experience that the way of the transgressor is hard. When he gets full and brains a good citizen, hang him, and let all of his ilk know that they who do wrong must suffer. Don't let us be forced to divide this country into two great classes—the fools who are outside, and the villains who are inside of, the "retreats."

The liquor question can be settled when drinkers are given the cold shoulder, by decent people in the

upper social scale, and when they are adequately punished on both scales.

Is it true that the offspring of inebriates are generally bad? Is heredity or are association and example to blame for continuous inebriety and crime in families? These are questions not so easily decided as some writers would have us think.

Before noticing at length these points we must remember the truth of the adage that "one swallow does not make a spring." The beautiful and accomplished daughter of the millionaire elopes with the ignorant black or white coachman. Nobody would look for the explanation of this wild freak in the sexual short comings of the parents. Some idle crank finds brief enjoyment in rushing out of dark alleys and hugging roseate, but terrified femininity. Nobody thinks his father's life ought to have a moral raking over. Actuated by a sexual or other perversion another idler finds enjoyment in cutting off the hair from young women's heads. Why would you not find some reason for looking up the history of these people's ancestral sobriety, just as surely as you would when some inoffensive citizen is stabbed to the heart by a man who, to save his neck, pleads that he did not know what he was doing? Out of all calculation in matters of this sort it is absolutely essential that we eliminate those cases wherein the perversion of a vegetative function, stimulates to activity a craving which is not so much not under control of the will as is not encouraged to be under it.

Two men meet over the settlement of business matters. In the course of adjustment one calls the other a liar and gets knocked down for his rudeness. In the determination to get revenge the vanquished starts out in quest of courage and a gun. He gets the first in the saloon and the other equally as easily. Then begins a hunt for the man who struck him, only interrupted by a steadfast devotion to keeping the courage furnace well filled. After awhile accident may put in his way his late antagonist, and if the courage and muscular steadiness are in right proportion he may shoot and kill somebody. What in the world is the use in going into the dead past, and raking over the musty records of the murderer's parents to find out if this man was not forced to do this act? At the time he started out on his unholy mission he was sane, and while sane he resolved to do an unlawful act. Maybe he did not resolve to kill the innocent man his uncertain aim effected, but he went on an unlawful mission, and he should be punished for that act just as certainly as anybody should for murder at any time. There is not a man in a thousand who does not know how liquor affects him. The drinker gets what he goes after every time. If a man will drink when he knows that while under the influence of drink he is quarrelsome and violent in his actions, he cannot plead irresponsibility after the act is done.

There can be no doubt, but that close communion with ardent spirits will in time ruin mind and body, and the time will depend on the steadfastness of the devotion and the temperament of the individual. There is not in that fact any warrant for the conclusion that a man who drinks to excess cannot govern himself or is insane, both when he is in liquor and when he is not. Would it not be better to bring such men up with a start before the habit is an ungovernable passion, than to feel sorry until it is everlastingly too late to do anything else? The free moral agency of man is a birth right which he cannot dispute and preserve his identity. When the State comes to recognize the truth that crime and ignorance go hand in

hand, a great stride will be made in lessening wrongdoing. In this matter I recognize the fact that gentle crime is on the increase; that pious men of education chase the nimble dime with more zeal than discretion, but there are in every city and town in the land children who have no chance to do other than become vagabonds and toughs. From the cradle they are treated as such, and as years are added to their lives they become more and more just what they are trained to be. If you treat a boy as a thief and a ragamuffin he sooner or later becomes one in fact. If everybody about a family of children drinks and indulges in drunken carousals, it is safe to say that these children will follow in the footsteps of their examples. Large sums are paid every year to carry the news of a merciful Father's love to heathen lands while thousands grow up in ignorance, idleness, and crime here at home, knowing little of the tender care of a father whose love seems to get no nearer than around the block. In the fullness of time may be the love of conquest and display will be cast aside, and then the little heathen who wants only a chance to make a good man of himself, will not have his future marked out for him in the slimy slough of ignorance and crime. Every chain is just as strong as its weakest link, and no State can be great that has so much to keep its people from getting away from the habits of life which dam up all the avenues of approach to good citizenship.

Drunkenness is a crime, and as such it should receive the sentence of condemnation. It is a crime against decency, order, and good citizenship, and more than all it is a crime against the children of the offender. The glory and greatness of a State depend upon the intelligence and virtue of its people. Then no State can afford to let any mock sentimentality interfere with giving to every child in the land a chance. No child whose education is neglected and whose life is brought face to face with squalor and want and crime, has a fair chance in the great race of life.

When the State will see that its people are given the rudiments of an education, and the youth of the land are given a chance to be men and women of worth, and not forced to follow in the footsteps of a besotted father, freedom will be larger in the minds of the people even if it is no larger on our banner.

Heredity during the last decade has had a good deal of attention, and many things that we were taught to regard as mere cussedness are now charged up to the account of a defective ancestry. Although much has been done in this special line, and much that has had only the authority of a prejudiced few as authority, it is evident to the student of physiology and psychology, that much that has been done has not yet reached the round of accepted fact. When all the bearings of licentiousness, intemperance and the almost innumerable vices which so many have singly, or in groups are traced through generation after generation, doubtless much will be learned, and heredity, recognized as possessing laws immutable and inviolable, will no longer form a dumping ground for wild and improbable theories.

AN Ohio doctor, who had worked hundreds of cures with his liver medicine, owned up the other day when dying that his "remedy" was of no earthly good in a real case, but that he simply worked on the imagination. He says a man who won't believe in anything else will believe that his liver is out of order.

SOME RESULTS OF THE USE OF PEROXIDE OF HYDROGEN.¹

By F. W. FRANKHAUSER, M.D.,
Pathologist to Reading Hospital.

MR. CHAIRMAN, AND MEMBERS OF THE READING MEDICAL ASSOCIATION: It affords me great pleasure to present to you some of my observations of the use of peroxide of hydrogen, and in order to bring it properly before you, a few words as to the reasons it should be used. Pathogenic bacteria are of great interest to us as physicians, and it becomes us as men, and as guardians of the human family, that we should make great efforts to study the different pathogenic organisms.

According to Dr. Robert Koch, a micro-organism to become pathogenic must present the following characteristics:

1. It must be found in the excretions, secretions, or in the tissues of the animal suffering or dead from the disease.
2. The micro-organism must be cultivated out of, or from the organism.
3. A pure culture of the organism should reproduce the disease by inoculation of a healthy animal.
4. The bacteria should be found in the animal after death.

Some of the bacteria are changed in their effective power by the soil in which they grow, in a measure similar to the plants in the vegetable kingdom; in some instances almost changing to a different variety, by losing some of its chief characteristics.

Most of the bacilli of different varieties have been found in the blood and tissues of the parts affected, as well as the blood of the whole body.

As to the number of diseases caused by the bacteria or their poisons, it is almost unlimited: diphtheria, croup, bronchitis, pneumonia, typhoid, typhus fever, scarlet fever, yellow fever, phthisis, gonorrhœa, syphilis, small-pox, influenza, and diarrhœa of infants, etc.

Now, gentlemen, if it is true that these diseases have their origins from these germs, or bacteria, is it possible that so many years have been spent in studying the physiological effects of remedies, upon the animal body, and not studying the effect of different remedies upon the destruction of those germs?

Or is it possible that our remedies have been misdirected, and our patients fortunately recovered, in spite of our interference?

You are all aware of the change in surgical dressings that have occurred in the last ten or twelve years. Many of the major operations are now performed, and rarely followed by surgical fever, and very rarely pus.

In medicine we have the report of 100 consecutive cases of typhoid fever treated by antisepsis, without a single death.²

After these considerations isn't it time that the profession bestir itself and get to the real cause of disease, and instead of prescribing remedies to cure diseases, prescribe rules and laws to be observed, so as not to furnish a proper soil, for those germs or their poisons to locate, or in other words to prevent the seed from taking root, after having been taken into the system.

Another fact known to pathologists is, that those germs, and their poison, or their product, are of an albuminoid character, whether it is propagative or

¹ Read before the Reading Medical Association.

² Prof. Wm. F. Waugh before the State Medical Society, Reading, June, 1891.

not; that it is coagulated and rendered inert by hydrarg. bichloride, boracic acid, aristol, and other antiseptics. It is also claimed that ozone will have the same effect as any of those, and that it is nature's antiseptic; that it will destroy all germs without destroying the tissues or the patient.

Ozone is a constituent of fresh air, and varies in proportion with temperature, dryness and moisture, and possibly with the electricity of the air. Billard, Wolf, Bockel and others, agreed that the cholera raging in Strassburg and Berlin, Milan and other places, coincided with the absence of ozone, and after ozone appearing in the atmosphere the epidemic was soon at an end.

F. H. Hammond, Moffatt, Romain, and Uhle attributed the prevalence of malaria, cholera, and other miasmatic diseases, to the absence of ozone in the air.

If those diseases are caused in the absence of ozone, is it not possible that all contagious diseases spread during the time in which ozone is absent. Then possibly when we talk of isolating our patients to prevent spreading of the disease, possibly the ozone killed the germs and saved the other members of the family, and not our isolation.

We all remember the peculiar state of the atmosphere during the epidemic of influenza, over a year ago, and as the air became colder with less moisture the epidemic was soon at an end.

Again, if some of the epidemic diseases are thus favored by the absence of ozone, are they not all?

Presuming these conclusions to be true, I think, was the true motive of the production of the peroxide of hydrogen, as it will give off nascent oxygen, and form water, ozone escaping. My experience has not been so large, but is large enough to reach some conclusions. I have treated 22 cases of suppuration of the middle ear; ozæna, 12; anterior and post. rhinitis, possibly 25; gonorrhœa, ophthalmia neonatorum, each, 1. In its application to pus, immediately a gas is liberated, and continues until all the parts are clean from pus, or until the peroxide of hydrogen is neutralized. It leaves the part to which it is applied in somewhat paler condition, removing all odor that may have been arising from the diseased tissues, and makes it look like a recent wound.

I will only mention a few cases:

O. B., aged twenty-three years, had suppuration of right middle ear for four weeks, when I first saw him. He was a very sick man. Temperature, 104° F., delirious, intense pain in head, a dark greenish pus was flowing from right meatus, whilst the meningitis gave me quite a little trouble. The case was treated by cleansing the ear with peroxide of hydrogen and dusting it with

R.—Boracic acid..... grs. xxx.
Aristol..... grs. x.

Sig.—Once a day.

In four days the discharge had completely ceased. After the patient recovered, and I could make a careful examination, I found the membrana tympani ruptured, and by filling the auditory canal with the dry powder, he could blow the powder all out, by simply closing his nose and mouth and blowing. He has since made a good recovery.

C. K., aged fifteen months, of a scrofulous diathesis, suppuration of both middle ears, enlarged glands of neck, pale and anæmic, no appetite, restless at night. Used the peroxide as a cleanser. In one week suppuration under control, treatment once a day. Boracic acid and aristol mixture.

W. K., aged nine years, suppuration of middle ear for seven years following scarlet fever. Used the

peroxide of hydrogen every three days for one week, suppuration under control.

Miss K. L., aged twenty-six years, suppuration of middle ear for seventeen years following scarlet fever. Membrana tympani of both ears gone, bones of ears exposed and ulcerated. Treatment similar to former cases. In two weeks entirely under control. In neither case was there any discharge longer than two weeks.

In ozæna and rhinitis I find it is an excellent cleanser, using it in 10 per cent.; softens secretions, removes foetid odor, and leaves the tissues clean.

It will soften the tough secretions of throat and nose in a short time.

In gonorrhœa I have the record of only one case, acute stage; discharge for four days, thick and ropy in character. Prepuce swollen, and almost a case of paraphimosis; painful micturition.

Applied the peroxide of hydrogen in 10 per cent. solution to parts once a day, with cotton mop, using an injection of 2 per cent. three or four times daily. In five days the discharge was gone, and no trace has since returned.

As an ozonizer I have used it in two cases:

C. H., aged sixteen years, whose mother, sister, and brother died of phthisis, losing in weight; no appetite; chilly sensations; night sweats; cough; expectorating tough mucus; percussion dullness of apexes of both lungs. Auscultation, prolonged respiration; cavernous breathing at apex of both lungs. Used the peroxide of hydrogen and glycerine once daily:

R.—Peroxide of hydrogen..... fʒij.
Glycerine..... ʒi.

Results: Coughs less; more expectoration; rests better at night; appetite poor; very little if any improvement. Have not examined sputum, as I have asked several times for it, but have not been able to obtain any.

Mrs. B., aged twenty four years; from Philadelphia; tall; slim in form; no family history as to phthisis; had influenza sixteen months ago; but has not been well since losing flesh; loss of appetite; cough and expectoration; some night sweats; pain in left apex region. Auscultation, bronchial breathing; large mucous râles over left apex; prolonged respiration; percussion, slight dullness over left apex, anteriorly and posteriorly. Has been under treatment for two weeks: appetite good; cough nearly gone; very little expectoration; gaining flesh; feeling very much better in every way. Bronchial râles gone; dullness nearly gone; prolonged respiration not well marked. Uses the inhalation daily for one-half hour. Under the microscope the blood corpuscles have a shriveled and dried appearance, almost losing the characteristic appearance of blood.

Dr. Weidman says he used the peroxide of hydrogen a number of times, with the happiest results, in pus cavities, etc.

Dr. Cleaver said he used it a number of times in gynecology, for cleansing the uterine cavity of tough mucus, and found it to be very useful for that purpose, with the exception that it corroded instruments in a very short time.

Dr. M. Luther said he used it a number of times, and found it to act admirably.

The action of peroxide of hydrogen on blood was shown to the society by the writer, fresh calf's blood being used, and some of it was readily coagulated. The action on egg albumen, permanganate of potassium, and guaiacum and malt, was shown to the society. All expressed themselves as well pleased with its effects, and some think it is the coming antiseptic.

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DELUSIONAL INSANITY.

WHEN the scientific treatment of mental disease was very young, generic terms did very well in grouping cases of insanity. Among the very old names that have come down to us, the title "Delusional Insanity," should be relegated to the nomenclature of the past. When the logic is weak, faulty ideas necessarily predominate, and when delusions occur in so very many different kinds of insanity, there is no justification for the use of such a term as "Delusional Insanity" when we would attempt to be precise. There are genuine delusions arising from the condition of the patient himself, and spurious delusions that may be simply absorbed by the patient, especially by the weak minded with an imitative tendency. There are the systematized delusions, indicative of a more fixed condition of the disease, and the unsystematized delusions, which are oftener found in less grave conditions. A further general difference may be made into exalted and depressed delusions, and still further we have the hypochondriacal, the persecutory, and either of these may be systematized or unsystematized, and as a sub-class we have the simple, the erotic and the religious. The different forms of insanity in which delusions of this kind may occur, are mania, melancholia, katatonia, several dementias, particularly the paretic, alcoholic, hysterical insanity, epileptic insanity, paranoia, and phthysical insanity.

The necessity for making these distinctions was brought forcibly to my mind in a recent medico-legal case, wherein some of the old time designations that would satisfy political insane asylum superintendents, were testified to on the witness stand. But, inasmuch as delusional insanity meant only that the insane person had delusions, and a moot point of prognosis was in question in which \$100,000 was at stake, the inutility of the term was manifest. In these days of differentiation in disease, omnibis should be left to the laity, who imagine they understand what is in-

cluded in "congestion of the brain," "softening of the brain," hysteria, malaria, etc. Pandering to popular ignorance by the use of such terms may serve a temporary, mercenary purpose, but it will not secure the respect of those who know better than to do so.

S. V. C.

MEDICAL EDUCATION.

THE lecture system grew out of the need for something to supplement the teachings of the preceptor. In the early days the student served an apprenticeship, beginning by attending the doctor's horse, his clothes, etc., as well as pounding drugs in the mortar and rolling pills. There was much good in these menial and manual beginnings, serving, as they did, to instil into the apprentice's mind a wholesome respect for the professional status. As the youth's arms ached from wielding the iron pestle he thought of the time when he, too, could go forth in broadcloth, with stately tread and wisest mien; with gold-headed cane and spotless small-clothes. And, when the elements of medical science had been fairly implanted, and the preceptor could impart no more, a winter in the schools followed, where the primary teachings were confirmed, corrected, or completed by the lecturers.

In fact, the lecture system was the capstone of the arch erected by the preceptor. But now the preceptor has become obsolete, and the college monopolizes the field of medical education from start to finish, instead of simply applying the finishing touches. When it is attempted to take a youth, fresh from the school or the plow, and educate him up to the modern physician's requirements, the lecture is insufficient. Either the medical college must be developed into a training school, or else the preceptorate must be revived. The first demands a graded course, with text-books, recitations, and manual training, instead of didactic lectures; and ward work instead of clinical lectures. The professor becomes a superfluity; the demonstrator, the quiz-master, and the clinical instructor take his place; and the lecture occupies merely the ornamental position it holds at a young ladies' finishing school. Even now this system has developed to such an extent that attendance upon didactic lectures is often looked upon as perfunctory, as a useless thing, to be neglected entirely were it not for that terrible final examination, for which the professor whose lectures have been "cut" can keep a rod in pickle for the delinquent.

Nevertheless, there is much to be said on the other side. The science of medicine has not yet reached the precision it enjoyed in the days of the Pharaohs, when every procedure was regulated by law, and he who ventured to use his own judgment in opposition to the code, did so at the peril of his life. Text-books vary greatly. No one comprises the good points of all; and there is a manifest advantage in having a capable and experienced man review all, keeping himself posted on all the work being done in his department, and furnish the results of his labor to the students. If he be a capable teacher, he will do this in a way that his hearers will appre-

ciate; he will interest them in his subject; he will give them in an hour the results of many hours' study on his part—results the student could not obtain in months, perhaps, even had he access to the same sources of information. Besides this, there is something fructifying in genius. It lights up a kindred spark in the minds of those who come in contact with it. How many men whose names are now honored in the profession can look back to the days when the words of Samuel D. Gross set their own brains to working. The same things might be set down in the book in exactly the same words, but they would not sink into the heart and leave an indelible impress there—as did the tones of that great man's voice. Indeed, the writer never listens to one of Gross' former students—Keen or Goodell, for instance—but that something, of earnestness and directness, perhaps, comes like an echo of the great teacher's utterances. We are free to doubt if any text-book, any demonstrator, ever aroused the love and veneration one feels for such a teacher.

If the lecture is to survive, it will only do so by the efforts of men who can make a lecture alive; who can put into it such force that the student goes away feeling that his hour has been well spent, that in no other way could he have learned so much, and learned it so well. There is no room in this busy age for lecturers who cannot do this, and the college that compels its students to listen to men who have not the faculty of teaching, simply plays into the hands of its competitors.

It would be a great benefit to the colleges that still place their main reliance on the lecture system if the preceptorate were to be revived. It is a question whether the man who has served a term in the office of a good general practitioner will not be found as well qualified as the one who has received only the training of the schools. Some years ago an attempt was made to direct attention to this matter by one of the Eastern colleges. Schedules were drawn up for the use of preceptors, with suggestions for the direction of the students previous to their entering college. The project was not pushed, however, and has been discontinued. Nevertheless, the office instruction could be developed in such a way as to be very useful to preceptor, student, and college.

Annotations.

INFLUENZA.

A recent meeting of the Chicago Academy of Medicine, Dr. H. N. Moyer read a paper on the nervous sequelæ of influenza; and in the discussion that followed, Dr. Clevenger mentioned accompaniments of la grippe, and among them the case of cerebro-spinal sclerosis simulation recently published in *THE TIMES AND REGISTER*, and in addition said he had seen the following nervous phenomena attending severe cases of the disorder: With Dr. Diedrich, a case of occipital neuralgia; with Dr. Freund, a case of brachial neuralgia; with Dr. R. Collins, spinal meningitis in a boy; and with Dr. William Quine, a severe facial neuralgia, in a man of sixty-five years, who was at one time apparently moribund from symptoms of cerebral compression,

but recovered after simple derivative applications to his feet. Dr. Clevenger called attention to the fact that the predisposition of the individual apparently determined the mode of manifestation in these cases, the weakest organs, especially mucous membranes, suffering most.

As to the causes of la grippe, Dr. Clevenger stated there was justification for the belief that they were extra-cosmical, as though the earth had passed through some gaseous nebula in space—a tentative hypothesis, which will answer very well until a better one can be obtained. A recent writer in the *Medical Standard* suggested that the coal gas emanating from imperfect stoves was an important factor in the disease. Another writer called attention to the great prevalence of la grippe in mining towns. This might suggest that the slight addition, to the atmosphere of the world, of gases such as carbon monoxide, may have something to do with the disorder, and, this being the case, where an extra amount of this gas is generated, as in improperly-ventilated rooms and in collieries, the conditions would be aggravated.

CLAIMS NO ORIGINALITY.

A FAR WEST correspondent to one of the medical journals details a case of opium poisoning, in which, after deluging the patient with emetics and warm water, and tickling the fauces to no purpose, it occurred to the doctor to try belladonna. To his delight, she responded beautifully to this procedure, and recovered without much trouble. He generously adds: "I claim nothing new in this treatment;" and continuing, says: "but being present at one time accidentally, I witnessed a case that was walked, dragged, beat, slapped, handled roughly every way possible, drenched with strong coffee, all to no benefit! I at length made myself known to the physician, but he refused my aid, and while doing so his patient died. I believe the belladonna treatment will relieve most all such cases."

Another correspondent relates what he calls a "Remarkable Recovery from Bite of a Rattlesnake," but which we think remarkable chiefly on account of the rather off-color methods pursued by the successful practitioner. The patient was a boy, the calf of whose leg had been bitten by a rattlesnake. The father immediately bound a silk handkerchief around the leg above the wound, and took the lad to the doctor's office, four miles distant, by which time the leg was much swollen and spotted a dark purple. The narrator immediately incised the wound at right angles—thus, +, half an inch deep—dissected up the flaps, and filled the cavity with carbolic acid. Four chickens were now successively killed, bisected, and the halves applied to the wound, until the flesh ceased to become green from absorption of the poison! The wound was now washed out with a solution of corrosive sublimate and filled with iodoform, after which the antiseptic treatment was further enforced by the following application: a poultice of warm cow-dung, wet with sweet milk, was applied, with orders to moisten the poultice every half hour with warm sweet milk. Internal treatment was not neglected; every thirty minutes the patient swallowed a half tumblerful of a combination, consisting of sweet milk and whiskey, in which were steeped the bruised leaves of a plant called "rattlesnake's master." After a little additional treatment in the way of an emetic of ipecac, and the stimulants, digitalis and carbonate of ammonium, the boy did pull through.

Letters to the Editor.

FOR TAPE-WORM.

DR. BRONOWSKY uses with indubitable success for expelling tape-worms the following mixture:

R.—Extracti filicis maris aeth. ʒiij.
Chloroformi. ʒij.
Mist. olei ricini. ʒiij.
Syrupi olei menthæ. ʒj.

M.—S. To be taken in two doses one-half an hour apart.

Usually, four hours after the administration, the worm comes out with its head downward, without the aid of any other purgative. On the eve the patient has to be kept on a light diet; at night before retiring, a clysma or 6 grs. of calomel must be taken. Chloroform, while acting on the worm, at the same time prevents nausea and vomiting, which are the usual results of the use of the male fern. By using this combination only, the doctor succeeded in expelling the parasite in most obstinate cases, where kousso, radix granati, and others, had failed.

S. SEILIKOVITCH.

338 SPRUCE STREET.

N. B.—I wish to correct a typographical error in THE TIMES AND REGISTER, August 1, 1891, page 81, line twenty-fifth from above: instead of *cancer*, read *chancere*.

S. S.

VULVAR ABSCESS.

WILL some one give me information as to the treatment of the following described case:

Mrs. R—, a lady of slight, erect form, who has been a patient of mine for several years, is afflicted with vulvar abscesses, having had, in all, about forty. The lady has been treated by several physicians in different localities with no apparent benefit.

My method of treatment has been this: Iodide and sulphate of calcium, with free evacuations and antiseptics.

I shall be very grateful for any information that may be given, in your next issue. Mrs. R— is about twenty seven years of age.

C. W. BRIESENICK, M.D.

COSTELLO, PA.

[Abscesses in the vulva are generally due to the presence of bacteria in the glands. The best method of treatment is to slit them up freely, and wash out the cavity, and the vulva and vagina as well, with peroxide of hydrogen solution. The washing should be thorough and repeated twice daily. One part to four of water is about the proper strength. After this, apply an ointment of petrolatum, with a little carbolic acid; say, ʒj to ʒj. This should be applied thoroughly to every part of the vulvo-vaginal mucosa. One thorough application may succeed where many partial ones fail. Internally, iron and quinine will often do much good. The use of sulphide of calcium and of phytolacca fails more frequently than it succeeds. Constipation should be relieved; the food should be nutritious, and the digestion regulated. A course of chalybeate water is often advisable; like the Bedford. Endometritis, if it exists, should also be treated, as there may be in the womb a focus of germ-production.]

A WARD for contagious diseases is to be added to the Chicago County Hospital.

Book Notices.

SIXTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF MAINE, for the year ending December 31, 1890.

The Secretary's report contains a number of interesting papers relative to the work of the Board during the year. We would like to see the day come when a chapter of these reports is read every day in the public schools. This might also apply with great advantage to the second part of the report, consisting of the work of Mary Hinman Abel upon practical sanitary and economic cooking.

The Medical Digest.

MEDICAL EDUCATION.—Medicine is advancing every day; it is a great science, and no man can obtain anything like a fair knowledge in two short courses. He merely gets started on the ground work. The world goes too much on experience; experience is all right if it is founded on science or classified knowledge, but experience or ignorance is the most damnable thing the world has to contend with. The fact is, we have too many institutions of medicine. We have ten or more here in Missouri, and the truth is we don't need over one, and every State one good one, and they should not be allowed to issue a diploma for the degree of medicine, but after taking the preparatory course in our home university, which should consist of three ten-month terms; then for our degree we should have one grand polyclinic, where they would issue our medical degree, being under control of the United States government, having laboratories fitted out for scientific investigation. If we had such training here, we would not have to be running off to Berlin and Paris and other foreign places of education.

—J. Anderson, in *Medical Brief*.

QUIZ COMPENDS.—There has arisen of late years a class of publications known as "quiz-compends," the design of which appears to be to assist the student in passing an examination. These books, in our opinion, belong to a vicious system, and contradict the principles of higher education. They do not teach the student to observe and reflect, but only to remember; their statements are too condensed, too bald, and must be memorized in a routine manner which does not call into play the higher faculties of the mind. They tend, in fact, to discourage thought. In an exclusive reliance upon such aids the under-graduate is so busied in committing compendious answers to memory that he loses sight of the underlying principles and pregnant relationships which serve as connecting links, which reveal the dependence of one fact upon another, and which really strengthen the memory far better than mere repetition. The man who relies upon quiz compends may succeed in passing his examination, but he is likely to have an ill-trained mind. The use of these books cannot lead to the formation of correct habits of study and thought. The graduate soon finds, perhaps to his surprise, that, though he has obtained his degree, he is but on the threshold of knowledge, and that the bald enumerations which seemed to serve a purpose during his college career prove but feeble props when he is confronted with the perplexing problems of disease.

—*Med. Bulletin*.

SNAKE BITE.—The safest and best treatment is to give, in all cases, a reasonable amount of a good quality of spirits frumenti until its influence is felt. But give the following prescription :

R.—Ext. jaborandi, fl. 1 ounce.
Ext. gelsemii, fl. 1 drachm.
Glycerine 1 ounce.
Aquæ q. s. ad 4 ounces.

M.—Sig. Teaspoonful every hour until sweating commences, then less often.

I have been using the jaborandi in a number of cases, and I think it is a better, safer, and speedier antidote to snake poison than whiskey. Jaborandi is a better specific than whiskey, but it is best to use both. My authority for using the jaborandi is the following extract from a medical journal: "Dr. H. C. Yarrow, curator of reptiles in the National Museum at Washington, has been conducting a series of experiments for the purpose of discovering an antidote for the venom of serpents, and he reports that his efforts have been crowned with success. He has found that in pilocarpus (jaborandi) we have the most perfect antidote ever discovered."

—J. A. Henning, *Med. Brief.*

INFANTILE DIARRHŒA.—It is more than probable—and this theory is finding favor among the best thinkers in the profession—that the fermentive changes following general enfeeblement produced by excessive heat, engenders tyrotoxicon. Frequently after emesis and diarrhœa are under perfect control, patients succumb to peculiar brain lesions which appear to be toxic.

It is certainly rational treatment to arrest abnormal fermentive changes, and render innocuous the toxic products of these changes. Various means of retarding or stopping degenerative change have been proposed and practised, many of which have some merit; yet it is not sufficient, in many cases, to prevent further fermentation, but it is also requisite to render inert or insoluble toxic elements forming or already formed. We have used cupri arsenitis 1-100 gr. in 4 ounces of water, giving teaspoonful doses every ten or fifteen minutes for the first hour, and hourly afterward till vomiting and diarrhœa were under complete control. This treatment, in connection with that mentioned in the July number of the *Journal*, has afforded us great satisfaction. It may be added, in passing, that this treatment is very efficient in dysentery.—*Indiana Med. Journal.*

TREATMENT OF JOINT TUBERCULOSIS.—1. In the early stage—i. e., in the stage of so-called "growing pains," slight limp and swelling—absolute rest to the joint with tonic treatment and improved hygienic surroundings for the patient. Persevere longer in the child than in the adult.

2. The moment caseation or retrograde change begins—a somewhat free incision with erosion, if necessary and possible; but should the process have extended beyond the cancelous ends of the bones, immediate excision is indicated. Never remain satisfied with erosion unless absolutely positive you have got entirely beyond the disease.

3. If, on opening the joint, the disease be found confined to the synovial membrane, the less radical operation of aspiration is indicated.

4. If the disease be as yet confined to the end of the long bone and the joint not yet invaded, removal of dead bone and diseased products with the sharp spoon should be tried, with the hope of arresting the

process. But should the destructive process still continue, excision is indicated.

5. In those joints where thorough erosion is impossible, excision would be indicated at that stage at which erosion would be done in such joints as the knee.

6. The early radical operation shortens the period of suffering.

7. Frequently, in the case of the poor man, instead of the word excision in the above propositions we should read "amputation."

—Bingham, *Canada Lancet.*

INOCULATION OF RABBITS WITH TYPHOID BACILLI.—The most striking feature of the experiments with positive result which are contained in our series, is the almost incredible length of time in which the typhoid bacilli in two instances remained in a living state in the bile of the rabbit, in one case this period being fifteen and a half weeks. It need hardly be said that in this, as well as in the other cases, every means was taken to fully identify the organisms obtained in the culture from the bile with the typhoid bacillus. It may also be added that we have never observed in uninoculated rabbits the changes in the bile which have been described, and that in conformity with the results of many other investigators we have found the bile of healthy rabbits to be free from bacteria. A number of rabbits kept for weeks and months in the same kind of cages, and under the same conditions as those inoculated have been sacrificed with entirely negative result so far as the lesions and bacteriological results indicated are concerned.

The chronic affection which we have produced by intravenous inoculation of rabbits with the typhoid bacillus does not differ, so far as we have been able to observe, from that caused by the colon bacillus, and therefore no additional comment upon this group of experiments seems necessary.

The occasional production of intestinal ulcerations with each bacillus, as well as the general resemblance and even apparent identity in their effects, robs the experimental results obtained with the typhoid bacillus of any specific character. It is by no means improbable that still other species of bacteria may be found which will produce the same effect.

—*Johns Hopkins Hospital Bulletin.*

RECOVERY FROM A STROKE OF LIGHTNING.—I was called, May 20, to see George Michiels and Emory Davis, who had been struck by lightning. On reaching them I found that Davis had somewhat recovered, but Michiels was gasping for breath, hardly conscious, and suffering great pain in the region of the heart, hardly able to talk. He was extremely pale and cold, especially the extremities; his feet were almost black. His respirations were about ten per minute; pulse normal, but very strong. I gave digitalis and ar. sp. cam. and morphine; removed him to his home, and applied hot bricks to the extremities and body. His respirations gradually became more normal, and the pain less. The extremities were still numb, dark, and almost paralyzed. He continued about this way until the following morning, and for several days was unable to perfectly use his right arm and leg; he has now regained entire use of himself, but is very nervous. He was not marked by the electric current, but his hat was torn in several places.

Davis was felled by the stroke, but was unconscious only a short time, and yet he was badly marked. The

face on the left side was burned through the skin, also the left shoulder; from there the current went to the spinal column, and passed down to the hips, where it spread over both sides, then down the left leg, burning the hair, and taking about one-half of his shoe away. He made a perfect and immediate recovery.

I am impressed with several facts in these cases:

1. That the electric current could be severe enough to prostrate, and render them unconscious, burn as it did, almost paralyze, and still not kill them.

2. It is remarkable that the one not marked should be so much worse than the one so badly marked.

3. That there has not followed some serious sequel.

—Kingsbury, *Weekly Med. Review*.

TREATMENT OF CEREBRO SPINAL MENINGITIS.—

A disease so bold and rapid, and fatal in its results, must be met by no faltering hand. It is no new thought that malaria is the cause, but I insist that the fact has not been fully recognized, and that the treatment, both prophylactic and curative, has not been thoroughly tested because of this want of recognition.

No disease of malarial origin can be satisfactorily treated upon general principles. It is a specific disease and requires specific treatment. Quinine is the antidote, and without, no success can be expected. There are many adjuvants which must be used; calomel in large and repeated doses, venesection and veratrum are among the best arterial and nerve sedatives, and at the same time they favor the absorption of other medicines, and the elimination of blood poison.

The bromides, chloral and morphine are to be used freely. The quinine should be used hypodermically in not less than five-grain doses, and at not longer intervals than one hour; the bisulphate is the best for this purpose and can readily be dissolved in warm water. There are a few cases which cannot be controlled in every epidemic of any disease, but they all have their prodroma, and if the medicines are given in time many cases can be prevented from reaching the grave type. This is eminently true of cerebro-spinal meningitis. It is as a prophylactic that quinine is to be the greatest boon. When it is threatening to be epidemic the physician should warn his patients that the first shooting pain and the earliest uneasy aching, the slightest headache or slightest arthralgia must be met with quinine. It is here that the inflammatory theory has done it greatest harm by withholding the hand in the fear of exciting it.

Let it be remembered that malaria is killing the patient, and not inflammation. If the patient survives the deadly touch of the blood poison then there will be plenty of time to treat the inflammation, which is one of the sequelæ of the perverted blood vessels caused by an influence exerted through the nervous system.

J. C. Nowlin, in *The St. Louis Clinique*.

THE INFLUENCE OF DIET ON THE GROWTH OF HAIR.—Several cases of shedding of hair after influenza have confirmed my opinion that diet has much to do with the production and with the cure of symptomatic alopecia. Hair contains 5 per cent. of sulphur, and its ash 20 per cent. of silicon and 10 per cent. of iron and manganese. Solutions of beef, or rather, part of it, starchy mixtures, and even milk, which constitute the diet of patients with influenza and other fevers, cannot supply these elements, and atrophy at the root and falling of hair result. The color and strength of hair in young mammals is not

attained so long as milk is their sole food. As to drugs, iron has prompt influence. The foods which most abundantly contain the above-named elements are the various albuminoids and the oat, the ash of that grain yielding 22 per cent. of silicon. With care these foods are admissible in the course of febrile diseases, when albumen is the constituent suffering most by the increased metabolism. I have often found a dietary largely composed of oatmeal and brown bread greatly promote the growth of hair, especially when the baldness was preceded by constipation and sluggish capillary circulation.

Those races of men who consume most meat are the most hirsute. Again, it is well-known in the Zoölogical Gardens that carnivorous mammals, birds, and serpents keep their hair, feathers, or cuticle in bad condition unless fed with whole animals, and the egesta contain the cuticular appendages of their prey in a digested or partly digested state. It is also an old well-proven fact that a closely restricted diet—cheese, for example—soon produces in dogs a loss of hair.

In treating fevers a long course of non-nitrogenous diet may promote seborrhœa, which is so often a concomitant of the alopecia. When the special nutritive supply is secure, the depressed condition of the vasomotor and trophic nerves proceeding from the cervical ganglia to the scalp may be stimulated by blisters and liniments at the back of the neck. I have always found that friction of the scalp with pomades and lotions dislodges many hairs which might otherwise remain, and that cold or tepid baths with salt water added and rough rubbing of the rest of the body will flush the capillaries of the affected part more effectually. Besides, when pomades are used, frequent washing becomes necessary, and this is conducive to baldness.—Mapother, *Brit. Med. Jour*.

RULES FOR INJECTING HEMORRHOIDS.—1. Cleanse thoroughly the needle, syringe, tumors and surrounding parts with some good antiseptic solution before operating.

2. Expel the air from the syringe and run the nut down, thus accurately gauging the amount to be injected.

3. Insert the needle into the dependent portion of the tumor, to insure the fluid entering the pile-sack.

4. If it can be avoided, do not make the injection near one of the anal glands, because of the pain which is likely to follow.

5. Let the needle remain *in situ* until the sack begins to change color.

6. If the sack is small, inject from 3 to 5 drops; if large, 5 to 10.

7. Withdraw the needle by carefully pulling on the syringe, and at the same time gently pressing the sheath forward with the finger. By proceeding in this way a hemorrhage and loss of the fluid will be avoided.

8. Inject only one pile at a sitting; but, if it be very large, two injections may be made, some distance apart.

9. Inject only non-inflamed, isolated, pendulous tumors, situated well above the sphincter.

Great precaution should be used to see that the needle does not penetrate the tissues beneath the pile-sack, because of the likelihood of an abscess following. Caution should also be used in making the prognosis as regards the time required for recovery after the operation. While some cases get well in a few days, others require a great deal longer time, because of the complications which sometimes arise.

I shall now give the formulæ of some of the different solutions used by various physicians; carbolic acid, however, forms the basis of most of them; ergot and iron are sometimes used.

Dr. Kelsey keeps on hand the 15 per cent., 33 per cent., and 50 per cent., and pure carbolic acid, put up in water, with glycerine q. s. to make solution clear.

The following is a solution which I use a great deal: Olei olivæ, oz. 1; olei ergotæ, oz. $\frac{1}{2}$; sol. co-cainæ (5 per cent.), oz. 1; acidi carbolici, dr. 6. Misce.—Sperm oil or glycerine may be used instead of the olive oil.

Those who follow the Brinkerhoff system I think use the following solution: Acidi carbolici, oz. 1; olei olivæ, oz. 5; zinci chloridi, gr. 3. Misce.

The following is the formula which I am told is used by one of the advertising quacks of Kansas City: Acidum carbolicum (pure), drs. 6; naphthaline, drs. 2; morphine, acetat., gr. 10; hydrastis, gr. 5. M.—Sig. Inject. The morphine and hydrastis to be dissolved in chloroform.

There are many other formulæ which have been recommended by the various authorities, and have some merit, but which are too numerous to be considered in this paper.—Gant, *K. C. Med. Index*.

SYRINGING THE EAR.—Various ways of cleansing the ear are adopted and advised. None are so good for general purposes as to properly syringe it. In these cases the parents of a child should have it impressed upon them, that unless this simple treatment is carried out two or three times a day, and the discharge thoroughly washed out, all other adjuncts to the cure will prove nugatory. You should also apply to the ear some sort of dilute antiseptic, such as dilute carbolic lotion (1 in 80), or the boracic lotion, or the dilute perchloride of mercury. All lotions should be poured into the ear warm, and in a very dilute form. They should be allowed to thoroughly soak the diseased parts. Fetor and abundance of discharge being checked, you may apply astringents; sulphates and acetates of zinc or lead are good, so is the sulphocarbonate of zinc. These applications, again, must be warm and very dilute. In the otorrhœa of young people with this treatment a very large number of perforations will “dry up” and heal, the discharge ceasing. In cases of small round perforations, if the edges of the aperture are thickened and “callous,” a saturated solution of nitrate of silver may be most carefully applied with a fine camel’s hair brush. I must say a word about the so called “dry treatment” of packing the ear with powdered boracic acid, prepared chalk, and so on. The method is strongly recommended, but has been objected to, inasmuch as where the discharge is profuse the “caking” of the powder blocks the canal and prevents the pus escaping, giving rise to very disagreeable symptoms. In cases where the discharge is tending to “dry up, this method may be used with advantage. In these cases you may blow into the ear equal parts of prepared chalk and oxide of zinc with a small proportion of iodoform, in a very finely powdered condition. Of course it is perfectly obvious that, if there be any granulation tissue, and especially a polypus growing from the canal or tympanum, the discharge will be perpetuated until such conditions are removed. The methods of doing this I shall hope to describe in another lecture. Suffice it to say now that granulations may generally be subdued by the application of caustics. The best caustics I know of for this purpose are pure chromic acid potassa fusa, and strong “liquor

plumbi.” If you are tempted to apply caustics to granulations within the tympanic cavity, you must ensure that the parts are perfectly dry by repeatedly touching them with tiny pledgets of cotton-wool. Then try to make the granulations protrude a little way into the speculum; under good illumination, take the caustic and apply it to the granulation, not the wall of the canal. The pain caused by this application will largely depend upon whether the caustic has touched the granulation tissue only; occasionally it is very severe, but may be stopped at once by syringing the ear with warm water, which should be ready at hand. Another class of cases requiring special mention are those in which the otorrhœa is persistent, and the diseased processes implicate the mastoid cells. It is obvious that if disease, caries, and accumulation of inflammatory products implicate the mastoid cells, the parts are not directly accessible to remedies. In cases of otorrhœa with the granulation tissue and soft polypi in the canal, you must always make a careful examination of the mastoid process. If there should be tenderness or œdema, or redness, in such a case a free opening into the mastoid cells is essential in order to effect a cure.

—Shield, in *The Lancet*.

ARISTOL IN DISEASES OF THE EAR AND NOSE.—Aristol was so warmly recommended to me as an antiseptic and a cicatrisant, that I felt impelled to institute extended trials of it in polyclinic and in practice, for patients suffering from diseases of the ear and nose.

Rohrer was the first to announce the results obtained by the use of aristol in ear diseases. He used it in acute and sub-acute middle ear inflammations, by insufflation, after drying the cavity. There resulted a rapid decrease of secretion and tumefaction, and an early healing of the perforation.

Aristol was quite as serviceable in otitis externa and ozæna. Rohrer reports twenty cases in which the effect of aristol was better than that of the usual remedies, especially boric acid, iodoform and iodol.

Pirri, in 182 cases of rhinitis ulcerosa, ozæna and eozema of the nose, obtained very good results from the use of aristol in powder, and aristol ointment. Massini obtained excellent results in fetid rhinitis by the use of aristolized tampons.

I have employed aristol as a powder and as an ointment, and have also used it intimately mixed with glycerine. In 8 of my cases the suppuration was promptly removed. In 14 cases the result was gained, but not so rapidly. In 10 cases there was some increase of secretion.

Aristol proved to be exceedingly valuable—as also stated by Szenes—in determining the formation of granulations in the tympanic cavity, or auditory canal. Of 22 cases (of whom a portion had been treated by lunar caustic with little benefit), 13 showed under aristol a very rapid improvement. Within a few days the proliferations had completely, or very considerably, dried up. In 6 cases there was a somewhat less marked improvement. In 3 cases of otitis diffusa externa, with suppuration, the condition yielded quickly to treatment by aristol.

I obtained very satisfactory results from the use of aristol in nasal diseases. I tested it in 26 cases, of which 3 were of nasal syphilis, 15 were of non syphilitic ozæna, and 8 were cases of granulative formations.

The effect of aristol in a large majority of the above cases was really surprising. The aristol powder is much better borne than is the case with the sozoiolod salts, or the acetico-tartrate of aluminum, for which

I once had a preference. Headache occurred very rarely, and lachrymation was insignificant as compared with what we get from other remedies used in the form of powders.

After the first treatment by aristol, the fetor often disappears at once for twenty-four hours. On longer treatment the fetor vanishes for days at a time, and cure is finally obtained. The appearance of the mucous membrane quickly improves on the atrophic surfaces, as well as in their neighborhood, when the surrounding tissue is hypertrophied. I prefer aristol to acetico-tartrate of aluminum in these cases, for the latter is very irritating.

Ulcerous conditions, of syphilitic origin, showed a remarkable tendency to heal after a very short use of aristol. This remedy is, in these cases, second to none of those usually employed.

As in ear cases, so also in nasal cases, the proliferations of granulation tissue were very rapidly improved by the use of aristol. In many of my cases the granulations were permanently removed by insufflations of aristol, or by tampons impregnated with that preparation. I noted that aristol excited a less considerable hyper-secretion than other remedies—such, for instance, as iodoform, or the acetico-tartrate of aluminum.

For affections of the nose, aristol constitutes noteworthy enrichment of our treasury of therapeutic agents; and I would also recommend its use in aural therapy, in which it should receive a very extended trial.—Prof. K. Burkner (Goettingen University, Clinic for Diseases of the Ear), *Berlin. Klin. Woch.*, No. 26, 1891.

GERMAN AND RUSSIAN NOTES.

HERMAN MARCUS, M.D.

PYOCTANIN.—Dr. Willy Pohl (Berlin), says that pyoctanin:

1. Is positively non-poisonous.
2. Does not coagulate albumen.
3. Is very diffusible.
4. Has no smell.
5. Does not pain on application, but apparently stops pain. He further speaks of its use in surgery, especially in bruises of the skin, contusions, slight burns, wounds, fistulas, and suppuration of bone.

In skin diseases, such as herpes, acne, lupus and erysipelas, it has an excellent curative effect.

In diseases of the mucous membranes (nose, throat and ear), it also shows its therapeutic value.

Diseases of the eye, as conjunctivitis, iritis, keratitis, choroiditis, etc., may also be effectually treated with pyoctanin.

Dr. Schubart (Reinsoz) says that if 1–2 per cent. solutions are ineffective, 5–10 per cent. solutions may be used. Regarding the treatment of the mucous membrane he can not state in what per cent. solution to use it.—*Deutsche Medicinal Zeitung*.

TREATMENT OF SEROUS EFFUSION OF THE PLEURA.—Dr. Moritz advises to remove as quickly as possible the exudate, so as to prevent an incurable compression of the lung. He says that though some authorities wait three weeks before removing the effusion, his method is to do so at the end of the first week. The method is not new, but consists mainly of a combination of other methods.

He first administers 20–30 grains antipyrin, and orders a hot compress over the thorax. The patient will then commence to perspire, but should perspiration be too profuse the dose of antipyrine may

be diminished, or the compress may be removed. After supper above treatment is repeated and combined with a glass of hot punch. The patient will then perspire profusely for one to two hours, and fall asleep, when the compress may be removed.

In the morning the temperature has been diminished, the patient has appetite, feels weak, but otherwise very comfortable.

This procedure must be repeated for two to three weeks, morning and evening. The diet must be of a fluid character, sour milk being very much to be preferred.

With this method the effusion will soon be reabsorbed.

Not all cases can be treated by this method, but pericarditis or infiltration of the apex are no contraindications, except hectic fever with profuse perspiration is present. Such patients should take every evening egg nog (eiergrog). In affections of the heart care must be taken to control the perspiration according to the pulse. Salicylate of sodium may be substituted for the antipyrin; pilocarpine is contraindicated owing to its action on the heart.

—*St. Petersburger Wochenschrift*.

THE TREATMENT OF PNEUMONIA WITH LARGE DOSES OF DIGITALIS.—Prof. Dr. Z. Petresco (Bucarest), claims that only 1–2 drachms of digitalis per diem will be effective in the treatment of pneumonia. In some cases he gave 5–6 drachms of digitalis leaves in five days, without producing any symptoms of poisoning. The temperature was reduced 1° – 3° C. ($1\frac{1}{3}^{\circ}$ – $3\frac{2}{3}^{\circ}$ F.) after one dose; 5° – 6° C. (9° – $10\frac{1}{3}^{\circ}$ F.) after administering two to three doses. The pulsation showed 40–60 beats less than before giving the digitalis. The local symptoms were also improved. He claims for such treatment only 2.06 per cent. deaths in 825 cases. H. Citron (*Deutsche Medicinal Zeitung*), says that such a reduction in the pulsation as Petresco claims is positive of poisoning, even though other symptoms did not appear.—(*Deutsche Medicinal Zeitung*).

TREATMENT OF EMPYEMA.—Dr. Verbélyi says that three indications must be fulfilled in the surgical treatment of empyema:

1. To remove the pus.
2. To prevent new formation of pus.
3. To restore the normal condition.

Verbélyi does not use Dieulafoy's aspirator any more, as the second condition is neglected in such treatment. His method is to make a single incision in one of the intercostal spaces (generally the sixth or seventh), which incision can be made easily and without anæsthetizing the patient. To resect a rib, he thinks to be superfluous and unnecessary, except when the ribs prevent the free flow of pus. He then introduces a drainage tube into the cavity and cleanses with a 30 per cent. boracic acid solution. He considers the entrance of air into the pleural cavity as of no importance. By this method Verbélyi claims success in 60–80 per cent. of his cases.

—*Wiener Med. Wochenschrift*.

Don't swallow ice water; danger it breeds;
Don't stand in the treacherous breeze,
Don't call for fat meat when you sit down to eat,
Don't worry, but live at your ease.

Don't become heated—let exercise go;
Don't seek for society's whirl,
And one above all you had better recall—
Don't flirt with the sweet summer girl.

Medical News and Miscellany.

A MINISTERING ANGEL.

Oh, woman in our hours of ease,
Uncertain, coy and hard to please,
When pain and anguish wring the brow
Then none so cheaply pleased as thou!
We've only to submit to take
Hot rhubarb tea and anti-ache,
And gizzard oil and ipecac,
And porous plasters on the back,
A flax-seed poultice, catnip tea,
And Quackem's new discovery,
Hot-water bags and sweats beside,
And camphor nasally applied,
And castor oil and vaseline,
And coals with feathers burnt between,
And soothing syrup, paregoric,
Cold-water cloths and drinks caloric,
And all the housewife's category—
'Tis then we see her in her glory,
Needing to make her bliss complete,
But mustard plasters on our feet.

—*Harper's Bazar.*

ACCORDING to Cesare Lombroso, genius is a degenerative epileptoid psychosis.

Two Chinese, alleged to be lepers, were admitted to the New York Charity Hospital last Monday.

THE longest umbilical cord we ever measured was sixty inches; the shortest, eighteen inches.

—*Kansas Med. Jour.*

OVER 800 patents have been granted by the United States Patent Office on storage batteries and their details.

DR. C. N. PALMER, of Raymond Center, Wisconsin, was arrested last Sunday on the charge of burglary.

BALTIMORE druggists want to compromise, and offer the Bell Telephone Company \$50 a year for telephone service.

SINCE oil has been discovered in Greece no one now speaks of carrying coals to New Castle. Petroleum has been found in Zante.

DR. H. STEWART, an aged physician of Bedford, Pa., committed suicide last Monday by shooting. Cause: Ill-health and despondency.

DR. C. S. MARTIN has resigned his position as Assistant Resident Physician at the Insane Department, Philadelphia Hospital, and will go to Berlin.

AN Ohio oil well started off at the rate of 70,000 barrels per day. If it improves the owner might be able to exchange his well for some family physician's practice.

THE August number of the *Dental Register* contains a translation of what is claimed to be the oldest dental book in the world, written by Peter Jordan, of Mayence, in the year 1532.

DR. ARCHIBALD has been appointed on the Advisory Board for the Chicago Insane Asylum and Almshouse, and Dr. E. Fletcher Ingals on that for the county and detention hospitals and the jail.

DR. F. W. SCHOOP (Chicago Medical College, 1877), of Lockport, Illinois, has been arrested on the charge of sending improper matter through the mails, and has, in consequence, to face a suit for divorce.

THE Seventh Annual Congress of Hygiene and Demography opened in London, August 10. Among those present were Pasteur, Koch, and the Prince of Wales. Many important subjects will be discussed.

DR. W. R. McKenzie, of Chester, Illinois, has been elected to succeed Dr. Rauch as Secretary of the Illinois State Board of Health. Dr. McKenzie graduated at the University of Michigan in 1870, and has been a member of the Board since 1883.

AN elopement by balloon has recently occurred in the West. It is doubtful whether it will ever become popular. While the dangers of being overtaken are very much reduced, the dangers of being undertaken are considerably increased.—*Christian Register.*

THE holes for the telephone poles were dug in town on Wednesday and the line will be pushed right through.—*Ebensburg, Pa., Mountaineer.*

Let the inhabitants of China beware, lest they be thumped on the head by a line!—*Electric Review.*

FROM Lima and Callao it is reported that small-pox is spreading and the citizens have no idea of what the authorities mean to do. Even elderly persons are subject to it, and yet very little activity is employed by the Sanitary Board. The doctors cannot get vaccine matter.

TO EXPRESS the good-luck besetting the path of an individual, a friend said that "if he fell into the gutter he would pick up a gold watch and chain." But a Reading boy has done better. He is said to have fallen out of a window and cured an epilepsy of six years' standing.

AFTER a three weeks' experience with a sick baby, we are of the opinion that the best thing for a case of cholera infantum is an alcoholic bath—saturate a flannel rag with alcohol and bind it around the child's bowels. We are also of the opinion that beef tea and some of the prepared foods are much safer than cow's milk.—*Youghiogheny Times.*

CAN this degenerate age show any specimen of "surgical enthusiasm" to match the following? Abernethy had been delivering a clinical lecture following a lithotomy, and waxing eloquent with the interest of his subject, he finally burst forth: "Gentlemen! if there is no cutting for stone in heaven, I don't care to go there!"—*Vis Medicatrix.*

A CASE of supposed leprosy has been discovered in the County Hospital at Chicago, the patient being Martin Gaelick, an Austrian, about fifty years of age. He served many years in the German army, and came to Chicago two years ago. About eight months ago copper-colored blotches appeared on his skin, and he became affected with local anæsthesia. A microscopical examination will be made.

THE New York Health Board shows that the discharge of the city's sewage into the rivers has at last attained a point which renders the use of swimming baths along shore dangerous to health. This must soon become true of the whole of the shore lines below One-hundred-and-twenty-fifth street on the West and the Harlem on the East, if, indeed, it is not already so. Before the Long Island shore shall line a city continuous to a point above Astoria, and the Hudson another stretching to anywhere near Fort Lee, it is apparent that the sewage problem will have become one of life and death.

DR. A. V. WIMERMARK has been removed from the position of Medical Superintendent of the Chicago Almshouse. There was a consensus of opinion among the investigating committee as to the existence of abuses, but a divergence as to Dr. Wimermark's culpability. The balance proved against him, and he was ousted after a lively fight. He graduated at Rush Medical College in 1884.

THE establishment of a distillery upon the river Treweryn turns out to have been a great benefit to the fish. The mixture of barley and hot water, writes a correspondent of the *London Field*, which the distillery discharges at regular intervals, has decidedly improved the size and quantity of the fish. The same correspondent says that in the Dee and Don and other rivers in Scotland, the same change is effected upon the salmon through the presence of distilleries.

A HOSPITAL corps has been organized under the direction of Dr. Shurley, with a complete system of medical and surgical assistants. Three temporary hospitals have been erected. Seven ambulances will be in constant use and twenty-five medical stations have been established in different parts of the city. In addition, the Emergency, Grace Harper, and Marine Hospitals, have offered to treat veterans free of charge, and all grave cases will be sent to these places, while about every physician and surgeon in the city will give his services without charge.

CHAUNCEY M. DEPEW's physician sent him to Europe with strict instructions to make no speeches until he got back. The way "Our Chauncey" proceeded to obey the mandate on board the steamer is best told in his own words: "I followed his advice by making a speech on the declaration of independence the second night; a speech on the captain's birthday; a third was a lecture to forty ministers; a fourth in the second cabin, and a speech at the concert on the fifth night. The doctor will be shocked."

GERMANTOWN HOSPITAL.—The report of the Germantown Dispensary and Hospital, prepared by the resident physician, Dr. William G. B. Harland, for July, is as follows: Patients remaining in the house July 1, 27; admitted during the month, 37; patients discharged during the month, 34; deaths in the house, 1; remaining in the house August 1, 29. In the dispensary, in the surgical department, 396 cases were treated; in the eye department, 132; the nose, 44; the ear, 25; the throat, 47; ambulance calls, 14; moneys received through the dispensary, etc., \$3.72.

THE ELECTRIC LIGHT IN DENTISTRY.—We now have the electric light to aid us in our dental operations, and I find by its use I can discover imperfections in cavities I have prepared that had previously escaped my attention. Why? Because the electric light gives a paler white light, and it is more intense than daylight. This is particularly so in that form of decay known as the white decay. You may prepare the cavity with the ordinary care, having it seemingly perfectly dry, and a magnifying glass will show you no imperfections, but with the aid of the electric light you find them.—Dr. Pruyn.

THE third annual meeting of the Tri-State Medical Association will convene in Turner Hall, Chattanooga, Tennessee, Tuesday, October 27, 1891, and continue in session three days. Indications are that it will be one of the largest medical meetings ever held in the

South. Representative physicians from all sections will be present.

All who desire to read papers should send title to the Secretary of the Association before September 1. In due time a circular will be issued giving a complete list of all papers and names of exhibitors who apply for space before October 1.

W. L. GAHAGAN,
Secretary of Ex. Com., Chattanooga, Tenn.

A GREAT scare was caused at Sheerness by the war ship Northampton signaling: "Explosion! Fifty-one injured." There was a lively scurrying among the medical corps, and within ten minutes a tug was started for the Northampton with a complement of doctors and plenty of splints and bandages.

It was happily found that the alarm was a false one, the Admiral having taken this method of testing the efficiency of the medical department. The medical officers were compensated by the Admiral's approval for the discomfort they had been subjected to in being suddenly routed out at night, and everybody retired well satisfied with the outcome of the exciting episode—supper, wine and cigars.

WE recently received a pamphlet filled with certificates of the virtues of a proprietary preparation which purports to be manufactured for physicians prescriptions "only," and out of pure curiosity, with the aid of "Polk's Medical and Surgical Directory" and the "Postal Guide," we looked up the status of thirty-eight of the M.D.'s taken as they were given in the pamphlets.

Of these, ten are reported as non-graduates, and no school of practice given.

Of fourteen, the names do not appear in the directory at the address given.

Of nine, there is no such office in State named.

Three, regulars, one of which is a college professor.

Four eclectics.—*Country Doctor.*

A NEW character of a swindler has made his appearance in the city. He is described as being about fifty-five years of age, five feet six inches in height, weighs one hundred and ninety pounds, has a gray mustache, and wears eye-glasses. His scheme is to call at the houses of physicians during their absence and represents that he owes a bill, which he would like to settle. He mentions the amount, and tenders a check in excess. In several cases he was given the difference in cash by a relative or employé of the physician.

His game was successfully played at the residence of Dr. Fox, 1304 Walnut street, for \$7, and at that of Dr. Schaler, Fifteenth and Spruce streets, for \$5. The checks were drawn on the Corn Exchange National Bank.

A PROCEDURE for arrest of attacks of whooping-cough employed by Dr. Naegely, consists in elevating the hyoid bone and larynx and maintaining it in this position for sixty to ninety seconds. The physician faces the patient and places his thumbs upon the greater cornua of the hyoid, while the index fingers are applied over the nucha. This procedure, which at once arrests the attacks, has been also employed by the author with equal success in the treatment of nervous conditions, neuralgia of the trigeminus, hemicrania, globus hystericus, nausea of nervous origin. He finds that one séance is often sufficient to cause the complete disappearance of the pain, while in other cases several sittings are required. More than fifty cases have been treated by this method

—*Semaine Médicale.*

CHILDREN'S SEA-SHORE HOUSE, ATLANTIC CITY, N. J.—Owing to the constant growth of the institution, and the very large number of children admitted free during the present summer, the Managers must appeal for assistance to continue the good work.

It is hardly possible to turn away a deserving sick child simply because it cannot afford to pay board; but in order to keep the house open until the cool weather, \$3,000 will be needed.

Contributions may be sent to the Physician in Charge, at Atlantic City, or to the following officers: James S. Whitney, *President*, 1815 Vine street; Frank K. Hipple, *Secretary*, 1340 Chestnut street; Edward A. Sibley, *Treasurer*, 136 North Fourth street.

If each physician who reads this would send \$1, the amount would easily be made up.

AN OLD TIME DOCTOR.—I like to think of the rich and pompous old doctor riding out to see his patients, clad in his suit of sober brown or claret color, with great, shining buttons, made of silver coin. The full-skirted coat had great pockets and flaps, as did the long waistcoat, that reached well over his hips. Rather short were the sleeves of his coat, to show the white ruffles and frills at the wrist; but the forearm was well protected in cold weather by the long gauntlets of his riding gloves and by his muffetees. Full knee-breeches dressed his shapely legs, while fine silk stockings and buckled shoes displayed his well-turned calves and ankles. But in muddy weather high leather boots took the place of the fine hose and shoes, and his handsome breeches were covered with long tow overalls or "tongs," as they were called. On his head the doctor wore a cocked hat and wig. He owned and wore in turn wigs of different sizes and dignity, ties, bags, periwigs and bobs.

—*Atlantic Monthly*.

THE extraction of teeth by electricity has excited a good deal of interest, and some curiosity has been expressed as to how the operation is performed. This is simplicity itself. When the patient takes hold of the handles of the battery the current is gradually increased in intensity until the patient can bear no more, then, while the forceps are being introduced, the current is turned off for a second and on again. The rest is the same as without electricity. The question, "Why is it that electricity prevents pain?" was recently ingeniously answered by Dr. Arthur Harries. He said: "Electricity travels over the nerve at the rate of four hundred and twenty vibrations a second; pain travels from the tooth to the brain in one-sixtieth of a second. My theory is that the electricity, being so much quicker and having the greater force behind it, gets to the brain first, and then keeps the line for itself, crowding out the pain."

POINTS ABOUT ADVERTISING.—John Wanamaker says: "I never in my life used such a thing as a poster or dodger, or handbill. My plan for fifteen years has been to buy so much space in a newspaper and fill it up with what I wanted. I would not give an advertisement in a newspaper of 500 circulation for 5,000 dodgers or posters. If I wanted to sell cheap jewelry or run a gambling scheme I might use posters, but I would not insult a decent-reading public with handbills. The class of people who read such things are poor material to look to for support in mercantile affairs. I deal directly with the publisher. I say to him, 'How long will you let me run a column of matter through your paper for \$100 or \$500?' as

the case may be. I let him do the figuring, and if I think he is not trying to take more than his share I give him the copy. I lay aside the profits on a particular line of goods for advertising purposes. The first year I laid aside \$3,000; last year I laid aside and spent \$40,000. I have done better this year, and shall increase that sum as the profits warrant it. I owe my success to the newspapers, and to them I will freely give a certain profit of my yearly business."

—*Indian Rubber World*.

THE late Dr. Vandell was fond of telling the following joke on himself: A lady patient of his, on entering his consultation-room one morning, greeted him with the remark, "Doctor, I had such a singular dream about you last night." "Indeed," said the doctor; "what was it?" "Why, I dreamed that I died and went up to heaven. I knocked at the golden gate, and was answered by St. Peter, who asked my name and address, and told the recording angel to bring his book. He had considerable difficulty in finding my name, and hesitated so long over the entry, when he did find it, that I was terribly afraid something was wrong; but he suddenly looked up and asked: 'What did you say your name was?' I told him again. 'Why,' said he, 'you've no business here. You're not due these ten or fifteen years yet!' 'Well,' said I, 'Dr. Vandell said—' 'Oh, you're one of Vandell's patients, are you?—that accounts for it. Come right in! come right in! that man's always upsetting our calculations in some way.'"—*Vis Medicatrix*.

AN OBJECT LESSON IN WEATHER.—Sergeant Dunn, who sends out weather bulletins, under the direction of Uncle Sam, from the top of the Equitable Building, gives the following general weather indications:

A red sky at night, whether clear or cloudy, indicates clear weather.

A sickly, greenish sky, means rain or wind.

Coppery and tawny clouds are signs of approaching wind.

A dark red sky in the morning means rain or wind.

A gray sky in the morning is a promise of fine weather.

Dark, gloomy, blue skies foretell a wind.

A light blue sky indicates fair weather.

Jagged, torn clouds announce the advent of high winds.

A "high dawn"—when the sun is first seen above a blanket of clouds—forebodes wind.

A "low dawn"—when the sun appears near the horizon—is a sign of fair weather.

In a general way the softer the clouds appear the milder will be the wind. Any change in colors means a change of some kind.

MATERNAL IMPRESSION?—One day I left the jar containing the monster in my consultation room on a table, and in plain view of any one who might enter. During my absence a lady called at my office, and strolled into the room where the specimen was left. This was the first thing her eyes fell upon; as she described it, an imp staring her in the face. She could not resist the temptation to look at it. She stood motionless and could not move for some moments; finally became thoroughly frightened, and when starting to leave the room came near falling. I saw her again in a week, when she told me she could not get rid of the mental picture. It was constantly with her when awake, and she often dreamed of it when asleep. She miscarried in about six weeks after seeing the monster, and gave birth to a monstrosity.

It presented an appearance very much like the first or larger monster. The vault of the skull as in the first was not developed, and the spinal canal was open as in the first. In addition there is a non-development of the soft parts of the neck, corresponding, I should say to the fourth branchial arch. Pregnancy terminated in this case about the beginning of the fourth month.—Ground, in *N. W. Lancet*.

WEEKLY Report of Interments in Philadelphia, from August 1 to August 8, 1891:

CAUSES OF DEATH.		CAUSES OF DEATH.	
Adults.	Minors.	Adults.	Minors.
Aneurism.....	1	Fever, typhoid.....	5
Alcoholism.....	2	Hemorrhage.....	4
Apoplexy.....	11	Infanticide.....	1
Asphyxia.....	1	Inanition.....	20
Bright's disease.....	7	Inflammation bladder.....	4
Burns and scalds.....	2	“ brain.....	9
Cancer.....	11	“ bronchi.....	3
Casualties.....	5	“ kidneys.....	3
Congestion of the brain.....	2	“ liver.....	1
“ lungs.....	2	“ lungs.....	8
Cholera infantum.....	80	“ pericardium.....	4
Cholera morbus.....	2	“ peritoneum.....	1
Cirrhosis of the liver.....	2	“ pleura.....	4
Consumption of the lungs.....	49	“ s. & bowels.....	7
“ bowels.....	1	“ uterus.....	1
Convulsions.....	11	“ spine.....	1
Croup.....	4	Jaundice.....	2
Cyanosis.....	5	Leucocythemia.....	1
Debility.....	3	Marasmus.....	40
Diabetes.....	1	Measles.....	1
Diarrhoea.....	4	Neuralgia of the heart.....	1
Diphtheria.....	14	Obstruction of the bowels.....	1
Disease of the heart.....	25	Old age.....	17
Drowned.....	3	Paralysis.....	6
Dysentery.....	3	Poisoning.....	3
Epilepsy.....	3	Septicæmia.....	1
Enlargement of the heart.....	2	Teething.....	3
Emphysema.....	1	Tetanus.....	1
Exophthalmic goitre.....	1	Tumor.....	2
Fatty degeneration of the heart.....	1	Uremia.....	4
Fever, malarial.....	2	Whooping cough.....	5
“ puerperal.....	1	Total.....	217
“ scarlet.....	5		262

MATERNAL IMPRESSION BY SUGGESTION.—A Nancy doctor asserts that maternal impressions and their effects on the foetus are due to what he calls hypnotic auto suggestion, and he believes that it is perfectly possible to determine the existence of any particular mark by subjecting the pregnant female to a strong dose of “suggestion.” Of course, it would be necessary to select women particularly prone to the hypnotic influence, because, to attain the object in view, hypnosis must be pushed to the degree of producing post-hypnotic hallucinations, and only a small proportion of women, pregnant or otherwise, are amenable to this extent. This ingenious gentleman is thoughtful enough to advise that the “suggested” mark should be located preferably on a covered part of the body; but before recommending any one to try his hand at this novel procedure, we should like to have some sort of guarantee that the mark, if produced, will come out on the precise spot, and nowhere else. It would be awkward if the beauty-spot cropped up on the face of the unlucky foetus; and it might even justify a claim for damages. It would be well to draw the line somewhere in respect of experiments of this kind, and it would perhaps be desirable not to go beyond cancer grafting, because one cannot contemplate with equanimity the prospect of a mottled future generation.

—*Hosp. Gazette*.

“SQUISH.”—An inquiring stranger who was being shown over a British wine manufactory was struck by several high mounds of crimson dust. These he was told were the refuse of the wine presses in which the juice of raspberries, currants, and other fruit used

in the business was extracted for making the wine. As it is seldom that anything is wasted in an English factory, an inquiry was made as to the form in which these mounds of dust would re-enter the market; the visitor was promptly told that it was disposed of to jam makers, to give the appearance of fruit to the pulp of turnip, vegetable, apple, or what-not which forms the basis of the confection. It would seem that almost anything will do to make jam of, as the chemist can produce a flavor to imitate every kind of fruit. It is commonly supposed that orange peel is picked up in the streets wherewith to make marmalade; probably this is a slander on the preserve maker, but according to the report of a case heard this year in a metropolitan police-court, rotten oranges in the condition of a “black pulpy substance,” and “quite unfit to eat,” as the inspector very sapiently remarked, are considered by the owners of the fruit as good enough to be “chopped up for marmalade.” Oranges for this “excellent substitute for butter at breakfast,” it was shown, cost only 4s. a box, whereas fruit for eating costs 12s. A disquieting fact, indeed.—*Brit. Med. Jour.*

FROM THE DIARY OF A NURSING.—A Dr. Guster gave a German newspaper the brief but pathetic journal of a baby who, after thirteen days in this world, departed, leaving these reflections for our instruction:

First Day.—Wonderful, heavenly! At last I am in this beautiful world! Who would have thought it, that one could breathe, freely breathe, and cry out what one thinks? I rejoice particularly in the sunlight and blue sky, in the fresh, pure air, with its coolness. If I could only see and feel all this splendor!

Second Day.—Oh, this horrible heat! I have been deceived. This air, this water, this light; how entirely different have I imagined it would be. But patience, all will come right by and by. The old woman who cares for me does not seem to understand me.

Fifth Day.—Still no solution! If it goes on this way I cannot hold out long. The whole livelong day must I lie buried in feather cushions so that I can scarcely gasp down a bit of air. Two linen and one flannel binders, a little shirt, a flannel slip, a long cushion filled with feathers, in which I am wrapped from head to foot; over this a coverlet filled with feathers, the curtains of my crib drawn to, the room darkened with double curtains, the windows closed—so must I, poor worm, lie from morning till evening. My burning skin is worse off than the hot stove near me, which can at least, as I feel, give off its heat. Oh, that I did know what I shall do! If I cry it brings the old woman with her milk, which increases my misery; if my hands are cold while my brain and skin are burning, she brings a few more wraps. I turn my half-closed eyes from side to side seeking help, and my tormentor says, “The baby shivers,” and really heats the horrible things at the stove. Will no one come to my relief?

Tenth Day.—Again a fearful night! I cry, but I am not understood. I must drink, drink, and again drink, until the stomach overflows. A half hour later they give me something with a horrible taste from a teaspoon. Air, air, pure, cool air, light, water! Shall I, then, have no help from this world?

Twelfth Day.—Yesterday there was a great council of my aunts and cousins. Each one advised a different remedy for my sickness, but all agreed that its

cause is a cold. Warmth was urgently recommended, and I received a new kind of infant food, just discovered, and some strengthening wine, which heated my brain yet a little more, so that I was deathly still. My body is wrapped so tightly with the roller that my stomach overflows every time a teaspoonful of anything is given. My feet are forcibly extended and enveloped, so I cannot bring them up to relieve the pain; but my feeling is gradually going. Would that all were soon over.

Thirteenth Day.—Farewell, thou beautiful world! Thy light and thine air have been denied me; but thither, where I go, there are no fetters.

—*Schweiz Blätter für Gesundheitspflege.*

DEATH DUE TO AN "ELECTRIC BELT."—In the *Kansas City Medical Record* Dr. M'Casey describes a singular case. A farmer, sixty-four years old, had formerly mined for copper, lead, and gold. He had suffered for years with "rheumatism;" a term employed to designate any chronic affection attended with pain. He purchased from a quack an alleged electric belt, consisting of twenty-four sections, zinc and copper, charged with salt and vinegar. This was directed to be worn for two days at a time. The first trial produced great swelling of the parts in contact with the metal. Ten days later he applied the neck piece, when the neck "swelled like a bull's." A week later the third application was made, when the metals "cut and scarred the patient frightfully," with inflammation of the skin, swelling of the limbs, intense burning pain, fever, chills, restlessness, and delirium. This appears to have been the last application. A week later the doctor was called in, and found the man in a bad way. His arms were enormously swollen, the skin inflamed; some days later the legs swelled. Temperature, 102° F.; pulse, 106. In a fortnight the œdema disappeared, the itching and burning abated, and a "spotted rash" broke out. Boils and carbuncles then made their appearance, in all numbering about one hundred. These were attended with a great deal of suppuration; but finally healed up, only to be followed by osteitis of the right tibia, and finally left pleuro-pneumonia. He died at the end of seven weeks. The teeth and gums were unaffected; the urine normal; there was no metallic taste in the mouth at any time.

INSANITY OF PUBESCENCE.—What may be the exciting cause of the insanity of pubescence it is sometimes hard to determine, but in a large number of cases it is a fact that improper training, over-indulgence of vicious habits, an unrestrained temper, at a time of life when reasoning power, tastes, judgment, habits and, in short, the entire being is gone through a process of reconstruction and consequently subjected to a most severe strain, exert a powerful influence. The future of the individual, at the period of puberty, hangs as it were in a balance, and very often it requires but a slight impetus to carry it over the border line between sanity and insanity.

I firmly believe that the influence of the parents on the child at this period of life shapes to a very great extent its future, and in a large number of cases those habits and tastes are formed, which are providing material not only for our insane asylums but for reform schools, prisons, and even the gallows. Vicious and unreasonable, or on the other hand over-indulgent parents, will produce in a child a spirit of obstinacy, disobedience or rebellion which will predominate over the better instincts and feelings, and make a beginning from which spring those traits and

habits which destroy the physical, moral and often mental balance.

Forced education in a measure exerts an influence at this time; and though I think the harm done by it is more evident in the physical than in the mental functions, it is certain that a weak and perverted condition of the former is a very material aid to the unbalancing of the latter, and it might therefore be considered as one of the predisposing and sometimes an exciting cause.

—Trowbridge, in *Alienist and Neurologist.*

GLYCERINE.—Glycerine has antiseptic properties, a circumstance which explains its value in the treatment of flatulence and certain forms of dyspepsia.

Glycerine is a laxative, and is especially efficacious as a purgative when injected into the rectum.

It seems to exert a beneficial action on nutrition, but does not increase the elimination of urea. Large doses give rise to a red coloration of the urine, due to the discharge of the coloring matter of the blood.

It is absorbed from the alimentary canal, and probably undergoes oxidation. Only a small percentage is eliminated with the urine. It has practically no toxic action.

Large doses of glycerine administered to dogs produce loss of muscular strength, lethargy, vomiting, dryness of the mucous membranes, intense thirst, lowering of the temperature, and death, preceded by coma and convulsions. Post-mortem, intense congestion with softening of the tissues is found in the lungs, kidneys, and intestines. These effects have not been observed in the case of man. Small doses administered to guinea-pigs improve the nutrition, there being a marked gain in weight, accompanied by a diminished excretion of urea, but in man glycerine exerts no controlling power over the waste of nitrogenous tissues.—Murrell, *Hosp. Gazette*

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending August 8, 1891.

MARMION, R. A., Surgeon. Detached from Navy Yard, Norfolk, and to the Navy Yard, Boston.

WINSLOW, G. F., Surgeon. Detached from Marine Rendezvous, Boston, and to the Navy Yard, Norfolk, Va.

PARKER, J. B., Surgeon. Detached from Navy Yard, Boston, and placed on waiting orders.

BRAITHWAITE, F. G., Assistant-Surgeon. Ordered to R. S. "Wabash," at Navy Yard, Boston.

URIE, J. B., Assistant-Surgeon. Detached from R. S. "Wabash," and to the Marine Rendezvous, Boston.

CORDEIRO, F. J. B., Passed Assistant-Surgeon. Detached from Naval Hospital, Chelsea, Mass., and granted two months' leave of absence.

PICKERELL, G. MCC., Passed Assistant-Surgeon. From Hospital, New York, and to Hospital, Chelsea.

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The Times and Register.

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Address.

RECENT ADVANCES IN THE TREATMENT OF TUBERCULOUS DISEASES OF THE JOINTS.¹

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HISTORICAL NOTES.—During the past thirty years very remarkable development has taken place in all departments of our art, and although I think the expansion of our knowledge in connection with diseases of the joints has been less brilliant than in many other directions, still it has not been less radical as regards the system of treatment. Until the time of the late Sir Benjamin Brodie confusion and uncertainty surrounded this class of disorders, but by the labors of this distinguished surgeon many of these diseases were disentangled from each other, and the affections of the articulating apparatus, which had been grouped together under the common designation of "white swelling," were clinically separated. In the fourth edition of his work *Diseases of the Joints*, published in the year 1836, he graphically described tuberculous disease of the bones as commencing by the deposition of a transparent material in the cancelli, and afterwards undergoing transformation into a yellow cheesy substance. He drew a correct picture of the slow progress of the inflammation, the caries of the bone, the recurrent centers of suppuration, and the final termination either in imperfect ankylosis or complete disorganization of the joint, associated too

often with pulmonary disease or some other visceral affection.

Brodie and Liston investigated the morbid alterations in articular cartilage and synovial membrane. They regarded the cartilages as prone to primary alterations of structure, and they initiated the doctrine that suppuration was a rare result of their primary ulceration, and that it took place only in the advanced stages of the disease, with caries of bone and destructive changes in the synovial membrane. They regarded the presence of capillaries as an essential condition of the inflammatory process, and they labored to demonstrate the vascularity of cartilage in disease. The pathological doubts and difficulties of these eminent surgeons occupied the attention of many of their followers, and their clinical observations were marked by clearness and accuracy, but their minds were prevented from forming correct interpretations of their facts by their strange prejudices and imperfect views of the healthy and morbid processes.

Some of the problems surrounding this structure were, however, at length solved by the labors of Redfern, Goodsir, and Rainey. These observers clearly demonstrated the changes which took place in cartilage by the perverted activity of disease. They asserted that it remained entirely non-vascular, and that its disorganization was always accompanied by changes in the size and form of the corpuscles, and softening and breaking up of the intercellular substance. During the process of repair they discovered that fibrous tissue had formed, and that into this new substance vessels were projected from the vascular system of the bone and synovial membrane, and thus the difficulties concerning the vascularity of inflamed cartilage were cleared away.

The Old Pathology of Tubercle.—The loss of substance in articular cartilage long occupied a prom-

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inent place in the pathology of joint disease, and observations on the wear and tear of this texture in the joints of men and animals were utilized in support of a mechanical theory of incipient disease. At length, however, these narrow doctrines languished under the expanding power of broader views. The belief soon became general that joint disease could have an origin in any of the joint structures, and that most frequently the error commenced in the bone or the synovial membrane. In a large proportion of chronic affections the morbid changes were found to be the results of a peculiar inflammation, attended by the deposition of a semi-transparent exudation, which had a tendency to unhealthy suppuration, and to undergo fatty transformation. Pathologists diligently studied the scrofulous affections of bone, and for a long period of years the essential element in the process was described as a deposit of tubercle—a formation of low type which sooner or later excited destructive changes in the surrounding structures. In one case a synovitis issued in a gelatinous degeneration which ultimately extended to the bone and cartilage; in another case, the deposition of tubercle in the cancellous structure caused an expansion of the bone which insidiously progressed towards softening and caseous changes, inflammation of the fibrous capsule of the joint, and hopeless destruction by suppuration and caries.

The Scrofulous Diathesis and Tubercle.—Now, the universally accepted theory of all these changes was the unfortunate possession of a bodily or constitutional condition which was styled the strumous cachexia. This was explained as an altered direction of the normal nutrition of the system, which could make itself visible on slight provocation in any of the structures or organs of the body. Scrofula was regarded as an inherited or acquired constitutional condition, which might at any moment assume the appearance of a distinct tuberculous disease. On the other hand, tuberculosis was always manifested by a wider departure from normal nutrition, and presented new and lowly-organized formations which were deposited somewhere in the organism in the course of chronic strumous inflammation. Virchow described scrofula as a disease of the lymphatic system, and tubercle as a new product derived from the lymphatic elements of connective tissue.

Universally, then, tuberculosis was defined as an inheritance very variable in individuals; at the same time, outside influences were recognized as powerful factors in kindling the smouldering flame into activity. For many years the nature of tubercle received profound investigation, and on every hand the results of research tended to establish the time-honored theory. The microscope failed to detect in it a specific element. All the histological constituents were in turn considered the essential ingredient in the deposit. Cells and granules, epithelial elements, and cells of giant form, were searched for some characteristic quality. Some of them appeared embedded in a fine homogeneous stroma, while others were either shriveled or drowned in particles of oil, or else buried in molecular matter. The morbid changes in bone were searched over and over again, but in the process of degeneration and caseation only negative elements were discovered. In one part the osseous structure was observed undergoing destruction, in another the osteoblasts were at work forming masses of protecting bone. With one voice the microscopists declare that they could find no specific element, and that tubercle was so indefinite in structure that it could be recognized by negative rather than positive characters.

Now these were the opinions which for more than half a century were confidentially taught in all the schools. Surely the experience of our day is sufficient to convince us that there is no part of our pathology which may not be transformed, and no theory which may not be pulverized by progress. These doctrines were considered orthodox for many years, and by the profound investigations by many men all difficulty appeared to have passed away. Tubercle had been examined by the best observers in the civilized world; thousands of clever eyes had gazed at it with intense persistency and curiosity, and with a remarkable unanimity they pronounced the opinion that it really contained nothing but cells.

The Modern Pathology.—In the year 1882 the whole pathology of tuberculosis underwent a great evolution by the complete demonstration of the life-history of the tubercle bacillus. The disease occurring in any tissue of an organism must now be regarded as specific disorder, the bacilli as the direct cause of all the morbid changes, and their presence as the distinctive sign of the disease.

Now it is only drawing a comparison between the old and the new pathology that we can readily decipher the magnitude of the revolution in our conceptions. We no longer fight about the primary seat of the disease, for it is now certain that it may commence in any of the tissues of a joint. At the onset it may be synovial or osseous, and when the origin is in the latter structure, it may select its surface or its substance. Strumous disease of the bones and joints is the same disease as tuberculosis disease of the bones and joints; for in all these affections a specific deposit can be detected. Tubercle bacilli are never found but in this special product, and wherever the tuberculosis tissue is discovered this microbe has obtained a resting-place. Their number may vary in the diseases of different structures, and also at different periods of the same disorder; still, when only a few are present they will be found by careful scrutiny.

The new pathology of tubercle is sustained by a mass of evidence derived from microscopic research, the artificial cultivation of the parasite, and experimental inoculation, so that the old notions which had long surrounded the disease have been numbered with the things of the past. The long accepted causes, too, have been dislodged from their position, and are rightly grouped as morbid tendencies. The inheritance of constitutional peculiarities, the liability to chronic inflammations, and the susceptibility to external influences are thus regarded as essential conditions which help the microbe to establish itself within the body. Still these factors are not less potent because the specific character of tuberculosis has been recognized. Hereditary proclivities and physical peculiarities of structure have not fallen into insignificance, but in their new position it will be possible to better estimate their potency.

Hereditary Transmission.—As regards the old doctrine of hereditary transmission, must we abandon it altogether? How is it possible for the disease to be conveyed from the parent to the embryo unless the spores of the bacilli are themselves actually transmitted? The living particles have in themselves no penetrating power, still their vitality is certainly intensified by contact with living tissues. As a general rule, they make an entrance into the body by the mucous surfaces, and then their diffusion is secure through the ever-flowing streams of blood and lymph. We know that they find their way into the bones and joints, and there appears nothing likely to

prevent them getting entangled with equal ease in the placental structures. I believe, however, that there is at least some evidence in support of the assertion that the microbe can pass freely from the mother to the foetus.¹ The great discovery of Koch may have around it many problems yet to be unraveled. It is, however, a fact of history that by his profound research he brought to light from the microscopic elements of tubercle a living atom which no human eye had seen before. Some have been so generous as to call it a lucky hit; but let us remember that the accident happened to a man of untiring energy and prodigious power of mental concentration, and these are qualities as essential for success in science as the full activity of the higher intellectual forces. I regard this power of mental concentration as the noblest element of genius. Do not the histories of men illustrious in science exhibit a passion amid their solitary labors? Every line of eternal truth that has been added to our knowledge; every new fact that has been brought to light from the deep secrets of the universe; every noble success in the onward march of science; every triumph achieved over the mysteries of the natural world, are the offspring of unceasing devotion.

Arrest Possible in the Early Stage.—The modern pathology of tuberculosis has already exercised a salutary influence over surgical treatment and the progress of conservative surgery. Its distinct recognition as a specific and infectious disorder, in all its various manifestations, has placed the hope of arrest on a very different basis to that which it previously occupied under the old constitutional theory. During the early stages of joint-disease the morbid action is often localized, and, therefore, arrest is at least possible. There can be no reason why a joint or a bone should not recover, and the tuberculous infiltration atrophy, and ultimately shrivel into a fibrous scar just like a similar deposit in the apex of a lung. If the number of bacilli found by microscopic examination in a part are to be taken as an indication of the activity of the disease, then repeated observations are favorable to the conclusion that incipient disease in the articulating apparatus is more hopefully situated than incipient disease in the pulmonary tissue.

It is true that the early arrest of tuberculosis has long been the result aimed at by treatment. Half a century ago Brodie described the slowness of the process. The cure in the advanced stages, he said, began when the sinuses closed and the œdema of the limb subsided, but the morbid changes in the joint generally terminated in more or less ankylosis, caused by the destruction of the articulating surfaces. The diseased limb should be kept in a state of perfect quietude, not that this alone would restore the bones to a healthy condition, but it would do much to prevent the inflammation extending to other structures. He recommended constitutional treatment, residence at the sea-side, nutritious diet, and exposure to fresh air.

We now restrict the term tuberculosis to those local and general changes which are directly caused by the irritation of a specific bacillus. Under favorable conditions, isolated patches of tuberculous formation may undergo atrophy, and the infiltration around them cease to extend. This arrest is the result of the timely death of the micro-parasite, for surely, by its destruction alone, the morbid action in the tissues can be localized, and the individual delivered from

the danger of a diffused tuberculosis. What, then, constitutes the grave difference between this curative process and the insidious progress of the disorder? Does it depend upon the strength of the inoculation and the number and vitality of the bacilli? or is it due to the intensity and persistency of the predisposing conditions or other factors in the causation which may be vital, or chemical, or structural peculiarities of blood and tissue? In the light of new facts I think we must admit that the case is really dependent upon the complete destruction of the specific cause within the affected structures. At the same time, experience teaches us that arrest is possible, and that this fortunate issue may be obtained by the healthful influence of sunlight, pure air, and good food upon the whole organism. I wish some philanthropic millionaire, for the sake of humanity and science, would try the experiment of submitting 500 scrofulous children living in the slums of our large centers and suffering from incipient joint-disease, to the renovating power of good food in combination with sea-side purity and brightness for at least eighteen months, and I am sure some of them would, by these potent remedies and the application of a simple splint, escape from more serious surgical treatment.

Value of Expectant Measures.—In the management of joint diseases we must take care to select the right moment for surgical interference. It is often an anxious question to decide when expectant measures ought to be abandoned. In the early stages the diagnosis may be open to question. Sometimes the threatening symptoms may be traced to a traumatic cause. There may be nothing in the local condition to indicate its specific character, and the general conformation and nutrition may not point to any predisposition to tuberculous inflammation. The affected joint may be swollen and occasionally painful and tender. Its outline may be altered and the normal movements impaired, and these slight indications may be marked by a persistent tendency to recurrence. In some cases the morbid action appears to have subsided, and the joint structures to have regained their healthy condition, but this favorable quiescence may be disturbed by the slightest injury, and any trivial accident may rouse again the dormant malady. Occasionally we obtain evidence of arrest many years after the favorable issue has occurred. I have seen several cases in which slight shortening of a limb has not been recognized until puberty, the period of life when the skeleton is in a condition of active development. The osseous deficiency is the result of latent mischief near the growing line, and the remnant of bygone epiphysial inflammation which happened during early life.

The late Hugh Owen Thomas.—A few years ago strumous children laboring under chronic joint disease were kept in bed for many months, but now expectant treatment can be carried out more hopefully by combining rest and protection of the limb with fresh air and exercise. The management of incipient joint diseases has fortunately undergone a silent revolution through the mechanical genius of the late Hugh Owen Thomas, of Liverpool. His surgical appliances are admirably adapted for taking off concussion, arresting friction, and imparting support and protection without pressure; at the same time they are so simple in construction that the patient can adjust them without assistance. Thomas' splints have been utilized by surgeons in all parts of the world, and the name of our old colleague will long have an honorable place in the surgical records of our times.

¹ Birch-Hirschfeld and Schmöll, *Beiträge zur path. Anat. und zur allg. Path.*, 1891, p. 429.

Tuberculin.—When, a few months since, the celebrated announcement reached us that a new remedy had been discovered, which possessed the remarkable power of causing the necrosis of living tuberculosis tissue, a new method of arrest appeared probable in recent cases, and material improvement in others of greater severity which would prepare them for surgical treatment. It is not my intention, however, to invade the arena of my distinguished colleague, Mr. Watson Cheyne, who has promised to day to tell us the results of his elaborate investigations with tuberculin, but I feel bound to mention that, although I have used the remedy in many cases of joint and bone diseases without decided benefit, it will still receive from me a full and impartial trial. It is certain that it contains an agent which is capable, even in almost an infinitesimal dose, of exciting active changes in the body containing any traces of active tuberculosis. In the chemical aspects of microbial life, and in the complex bodies which are formed by the artificial cultivation of the bacilli themselves, we discern the direction from which we may anticipate future discoveries. I regard the search for a remedy amid the growth of these living particles as a splendid effort to reduce the magnitude of a world-wide pestilence, for which, up to the present moment, no really scientific treatment has ever been propounded. The great German investigator has not yet finished his work; let us patiently wait for his results, and keep ourselves free from prejudice, hoping that his daring assault upon the most deadly of diseases may ultimately be crowned with success.

Surgical Treatment of the Past.—The recognition of the local character of tuberculosis in diseases of the joints has opened up the high road to many of the recent advances in surgical treatment. Sixty years ago these disorders were described by Sir Benjamin Brodie, as having their origin in the cancellous structure of the bones, or as a consequence of inflammation extending from the synovial membrane to the osseous tissue. Morbid action, he said, commenced sometimes in one and sometimes in another texture, and in the advanced stages all the structures of the joint became involved in the disease. At that time, however, the surgical treatment was really little else than splints and plasters, incisions and punctures, and at length amputation as a final remedy. The constitutional theory of tuberculosis blocked the road of progress.

Fergusson and Butcher.—Between the years 1830 and 1840, Syme in Scotland, and Liston in London, revived with energy the resection of joints for disease—an operation which had been occasionally performed by British surgeons half a century before. But it was not until Sir William Fergusson had successfully practised it that excision became an established manipulation on all the joints, and professional prejudices were vanquished. Only a few months since, Richard Butcher, of Dublin, passed away after a long and brilliant career. He labored, too, in his day to resuscitate the practice of excision, and devised the well-known saw especially for joint operations, and this ingenious instrument has certainly assisted the progress of conservative surgery.

Early Efforts.—Until the last few years early operations in joint disease had scarcely received any attention. In 1878, Volkmann, the inventor of the cutting spoon, performed several partial excisions in recent cases of hip-joint disease, but his results did not stimulate him to further trials. Since the year of the pathological revolution (1882) many favorable cases have been recorded, and I feel con-

fident the practice, although still regarded by some as experimental, has already saved many limbs from graver operations.

Advantages of Early Operation.—Whenever the indications for surgical interference are clear, early operation must be attended with many advantages. The risk of delay is always in proportion to the progressive and obstinate character of the disease, and timely aid will often prevent its extension, and at the same time deliver the patient from the danger of deep infection and the development of secondary tuberculous centers. The only hope of cure must depend upon the complete removal of the diseased tissue, and the facility with which this can be accomplished rests entirely upon the extent of the local mischief. The preservation, too, of useful mobility in the joint may be anticipated when the morbid process is well localized, so that the manipulation involves only a limited excision of synovial membrane and a partial division of the fibrous capsule.

Partial Arthroectomy.—For the successful performance of a partial arthroectomy there must be clear evidence of a localized deposit. In some cases children have exhibited very little pain or lameness, but the joint has been in some part swollen, with the capsule thickened and the bones enlarged, but without any indication of softening or suppuration. By a well-directed operation, near the neck of the femur or the head of the tibia, search has been made for a spot of tuberculous infiltration, with the result that a carious cavity has been found and small sequestra successfully removed. Surely these are examples of the enormous gain obtained by early operation.¹ If the latent disease had not been detected and cut out, the issue must have been irreparable injury of the articulation in every instance, and a more serious manipulation under conditions far less favorable.

Another recommendation for early arthroectomy is the little danger that attends the operation. With ordinary surgical precaution the risk may be fairly considered trifling, even when a portion of the bone has to be resected. After a full incision in the most convenient position for exploration and carefully defining the disease, the infiltrated tissue must be excised with the scissors or cutting spoon, and the cavity thoroughly flushed with hot water. To insure rapid union, the surface should be then dried, and the wound closed with deep and superficial sutures. The limb must be kept at rest until the healing process is complete. Up to the present time a great many partial arthroectomies have been performed in this country by different surgeons, but I am not prepared to state the exact proportion of their permanent successes; and it appears to me that a report of the results of early operations from many hospitals would prove at the present time a very valuable record.

Advancing Local Tuberculosis.—The articular cartilages are seldom the seat of primary disease, for as a general rule the morbid process has its origin either in the synovial structure or the articular extremity of the bone. When the osseous tissue is the seat of a tuberculous infiltration the evidence of its existence is often wanting until softening occurs within it, and inflammatory reaction takes place around it. As soon as these infective changes reach the synovial membrane they extend to all the structures of the

¹ Successful cases reported in the *British Medical Journal* by Messrs. Watson Cheyne, A. Barker, and Charters Symonds.

joint. Sometimes they make their way through the superficial cancelli to the outer layer of the bone, and then superficial caries and slow suppuration are the result. At another time the morbid process advances in the direction of the articular cartilage, softening and erosion of this structure follow, and then inflammatory changes which issue, unless checked by surgical treatment, in chronic abscess, caries of bone, imperfect arrest of the disease, and finally ankylosis. Now in all these forms of advancing tuberculous disease, surgery offers the only scientific method of treatment, and we can safely repeat our incisions, scoopings, scrapings, and cleanings, until the disorder is eradicated and a useful joint preserved.

Sudden Infection of the Joint.—But instead of a slow disorganization, the tuberculous center may be suddenly discharged into the capsule, diffusing the infective material over the whole synovial surface, and kindling suppurative inflammation with great rapidity. A few months since, I performed arthrectomy on a child for acute infection of the knee-joint. In 1889 the little patient was under my care, in the Royal Portsmouth Hospital, laboring under a small sub-periosteal abscess over the head of the tibia, close to the reflection of the synovial membrane. The swelling was freely incised, and a considerable deposit of caseous material cleaned out with the spoon. The bone was roughened perilously near the articular edge, and the parents were specially warned of the danger. Soon after the child left the hospital the swelling slowly recurred without either pain or lameness. In the month of July last, she hurt her knee during a game of play; acute pain immediately followed the accident, attended with rapid swelling of the joint and fever. Three days after she was readmitted to the hospital under my care. The knee was at once freely opened on both sides, and the inner incision was carried through the abscess cavity over the head of the tibia. The capsule contained about three ounces of a turbulent fluid with many flakes. The infiltrated synovial membrane was freely excised with scissors, the joint thoroughly cleaned, and the limb carefully placed on a back splint. Irrigation was continued for a week. The child was discharged quite well in January. The movements of the knee are now normal, a result due to immediate treatment and the limited injury of the synovial membrane.

Complete Arthrectomy.—Permit me now to offer a few remarks on the surgical treatment of more advanced cases, in which the morbid process is too extensive for any partial operation. In the performance of complete arthrectomy, a free division of the ligaments and capsule is necessary for the exploration of all the recesses of the articulation, and the excision of deep infiltrations of the synovial and osseous structures, so that the preservation of only a limited mobility must be anticipated. The whole of the pulpy granulation tissue must be dissected off, and the ligaments and cartilages carefully scraped. It is absolutely necessary to remove every particle of the diseased synovial membrane, and all tuberculous foci in the bones must also be cleanly cut out with the gouge. Care must be taken to prevent any remnants of the infective tissue being left behind on the raw surfaces, and the accidental reinoculation of the disease through the medium of the fresh incisions. I regard the method advocated by Mr. Arthur Barker, of flushing with hot water the seat of operation, to be the best way of carrying out these important precautions, and for the rapid performance of this part of the operation his ingenious scoop and irrigator will be found of

great practical utility. The operation of arthrectomy of the hip can be readily performed by the anterior and vertical incision and division of the neck of the femur with the saw, and then the excision of the infiltrated tissues. After a simple protective treatment for a few weeks, and the application of a 'Thomas' splint during convalescence, the results are often very satisfactory.

Surgical Treatment in the Advanced Stage of Hip Disease.—With reference to the old method of operating in the advanced stages of the disease, after suppuration has been proceeding for months, and sinuses have long riddled the soft parts, and when the unfortunate patient has been exhausted by a general tuberculosis, I sincerely hope it will soon be cast into the shade forever by the light of modern progress. It is my experience that these distressing cases recover more frequently by simple measures, consisting of free incision, scooping, irrigation, and drainage, and that the ultimate results are more satisfactory than those which follow the practice of severe and dangerous operations.

Complete Arthrectomy of the Knee-joint.—In performing complete arthrectomy of the knee-joint I consider the old horse-shoe incision, and an oblique division of the ligament patellæ, better than any other method for obtaining free access to the interior of the cavity. The practice of lifting up the tuberosity of the tibia instead of division of the tendon may be found very useful in some cases. It is important to clean carefully the lateral and crucial ligaments, and to avoid damaging the cartilages and articulating surfaces. Sometimes carious bone can be removed with the gouge outside the capsule of the joint. It must always be our object to secure the complete extirpation of the diseased structures, and to preserve as far as possible the mobility of the articulation. Fortunately the limb is not shortened, and the development of the bones is scarcely impaired. The articulating surfaces are in a great measure preserved, and the operation when compared with resection of the joint is attended with less risk of life. After arthrectomy I have seen a sound and useful limb with movement to the extent of 45°, and the patient capable of standing and walking many hours every day without fatigue. So good a result can only be anticipated under favorable conditions and early surgical interference. I have received from my colleagues in different places very varying reports of their successes. Sometimes they claim firm ankylosis, but at other times their operations have issued in weak limbs and joints, tending to serious flexion and displacement. Many of them were, no doubt, too late arthrectomies, and the careful excision of the bony surface would have been followed by firmer and better results.

The Old Operation of Excision.—With references to my own practice, I prefer at once complete resection in all cases marked with old sinuses and the carious remnants of old infiltrations. My method is to freely open the joint and to remove as thin a layer of bone as possible from all the articulating surfaces. The gouge is used for cleaning out any infiltrations, and then the patella is divided vertically with the saw. After cleaning every recess in the capsule, the bones are jammed together as tightly as possible, the periosteum is carefully sutured, and the wound closed, except at the extreme ends of the incision. Now, I do not presume for a moment that my results are exceptionally good, but I beg to submit to you photos of some of my patients upon whom operations were performed many years ago. I have often ques-

tioned them with reference to the inconvenience of the ankylosis, and, without exception, they have regarded it with indifference. One patient volunteered the remark that the only annoyance her stiff limb caused her arose from the necessity, when sitting in company, of crossing her legs.

Conservative Surgery in the Advanced Stages of Tuberculous Disease.—I am no advocate for any attempt at conservative surgery in the advanced stages of the disease, not from the dread of deepening the general and local infection from reinoculation through the seat of operation, but rather from the feebleness of the vital power which has been slowly undermined by prolonged suffering and suppuration. The intensity of the disease has been quickened by a chronic septic condition of the system, and it is the danger of its sudden aggravation, even with every possible precaution, which adds to the risk of surgical interference. The micro-organisms of septicæmia, or their poisonous products exert a marked influence over the course of tuberculosis, for their presence reduces the resisting power of the system, and helps on the local and constitutional spread of the disease.

But it is not only septic infection in its various forms that we have to combat, but every other kind of acute disorder of the blood. Children especially are liable to be attacked with any of the infectious fevers, and these are all attended with peculiar risks. Measles, from its disturbing influence over nutrition, is prominent among the group, for its power of re-kindling tuberculous inflammation.

Occasionally, however, I think that my experience has seemed to point in the opposite direction, and that an accidental blood storm has exercised a remarkable effect on the course of the malady. A young woman, who for many years had suffered from old disease of the knee, came under my care in consequence of acute inflammation of the joint, which she attributed to injury. Prior to this event she had undergone a good deal of surgical interference. Some years since I did a plastic operation for her, and in 1887, I performed abdominal section for pelvic suppuration and chronic peritonitis. A few days after her admission to the hospital her distress was so great, and the constitutional disorder so acute, that I decided to amputate the leg. She was, however, I think very fortunately attacked with severe erysipelas of the head and face, and after a few weeks' dangerous illness her recovery all round was so remarkable, and the joint symptoms so much reduced, that I did an excision. The wound healed with rapidity, and she is now earning her livelihood on two legs instead of one.

Now, notwithstanding the opinion I have expressed concerning the risk of late operations, exceptions occasionally occur in practice when interference appears to be the better course. There are certainly cases of chronic tuberculous joint disease marked by secondary centers and general infection, and even aggravated by a chronic septic condition of the system, in which the vitality of the tissues and the residue of constitutional vigor appears sufficient to warrant an effort in the direction of conservative surgery.

Permit me to offer you two examples.

1. Here is the photograph of a girl taken a few months after excision of the elbow. At the time of the operation she was laboring under partially arrested hip disease with still one discharging sinus, and tuberculous deposit in many parts of the glandular system. She is now able to follow any occupation.

2. This is the likeness of a young woman, an orphan, with strong tuberculous history, upon whom I did a similar operation on a joint riddled with sinuses and surrounded with infiltrations. She had distinct physical indications of pulmonary complication, old disease of the opposite knee, and a persistently elevated temperature. She has now recovered with a useful arm, and is enjoying apparently good health. I am quite aware that these may prove only temporary successes, but it is our duty to look always on the hopeful side. I am, however, quite certain that their future prospects have been improved by surgical interference.

In conclusion, I have endeavored to indicate some of the improvements which have taken place in the treatment of joint affections during the last few years, and to trace this progress to the influence of recent advances in pathology. Our science is destined to progress; before us there are great possibilities. It is true that to-day the pathway of scientific enterprise is still rugged and thorny, but obstruction is often a kindly foe, and prejudices are the secret friends of progress—like the rocky banks in the river's bed, which only display the resistless force of the flowing stream.

In reviewing the progress of the past we must not give way to wonder and surprise, but rather calmly cultivate a spirit of confidence and anticipation, and be ready to accept fresh light from whatever quarter it may fall upon us. May we, like Sir Benjamin Brodie, desire, above all things, the attainment of the truth, and be ready to pulverize our most cherished convictions, and to cast them away for ever, when truth and progress demand of us the sacrifice.

Original Article.

THE PRESENT OUTLOOK.

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JUST before the meeting of the American Medical Association, two other meetings were held whose importance to physicians as members of a learned profession exceeded that of the main gathering. I refer to the annual meetings of the American Academy of Medicine and the Association of Medical Colleges.

The reason of their importance, summed up in a few words, is this: For the last ten or twenty years there has been a strong tendency to lower the practice of medicine from its pristine and proper rank as a learned profession to that of a trade—and a second-class trade at that. The disgrace of this has been felt for some years, and the animus of the Washington meeting showed clearly that a halt had been called, and that enough intelligent, educated and progressive physicians were determined to elevate the standing of the profession to insure the success of the movement.

It may have been unfortunate that so many questions were raised and so few settled, but I hardly think so. By delay, hasty action has been avoided, and there can be no doubt that next year will find the delegates better prepared to act along the line of progress than they felt justified to this year. I speak of the two associations together, for in certain directions their interests are identical.

The American Academy of Medicine is an association of physicians who have received the degrees of A.B. and M.D. from colleges of recognized standing,

and been engaged in the practice of medicine three years. (It was proposed at this meeting to strike out the last clause, but I do not recollect whether it was done or not.) The object is to elevate the profession by associating together those who are alumni of classical, scientific and medical schools, and by encouraging young men to pursue regular courses of study in classical and scientific institutions before entering upon the study of medicine.

This may have the semblance of organizing an aristocracy of physicians, but such is not the intention. Of course, such an organization must require a certain degree of education in those admitted to fellowship, or it fails altogether of the object for which it was created, but beyond this single requirement not only are there no restrictions, but it is earnestly desired that all physicians who are eligible shall come in, and that those who are not now eligible become so, as soon as may be, by storing their minds with knowledge that shall put them on a par with college graduates.

Provision has not been made for determining the fitness of candidates, beyond requiring the possession of satisfactory diplomas, but an examining board will undoubtedly be provided in the near future to pass upon those who, lacking the advantage of a preliminary liberal education, shall repair this defect in after-life, and apply for fellowship.

One of the subjects for discussion at the recent meeting was a complaint that American physicians are not recognized as physicians in foreign countries. Why is this? It is because we have institutions in the United States issuing diplomas to men who really are no more competent to practice medicine than are first year students in foreign universities. And there is no standard in this country by which foreigners, or even natives, can gauge the right of graduates to such recognition as physicians licensed by German authorities receive in that country.

I think I am perfectly warranted in the assertion that if the American Academy of Medicine continues its work in the lines already laid down, the opening century will find fellowship in that body accepted throughout Europe as a satisfactory proof of a physician's right to be recognized and to practice as a physician. Such a result is the natural outcome of an honest and earnest endeavor to elevate the standing of the profession.

At the beginning of this article the Association of Medical Colleges was referred to, and its meetings certainly demand mention.

An attempt was made to form such an organization a year ago at Nashville, and the attempt was continued this year, and why did it not succeed?

Simply on account of the *trade* tendency already referred to.

Certain Southern medical schools have courses of study continuing over a period of less than six months, and other colleges represented by delegates at each of these meetings have courses of study continuing over a period of from six to nine months. The latter colleges think no institution should be admitted to the association whose instruction is all conferred in so short a period as six months. Hence the unsettled condition of affairs. Dollars and cents show the part they play when it is stated that in Louisville are four medical schools educating (?) several hundred young men in from forty to sixty weeks, and then granting them diplomas presumably entitling them to practice medicine anywhere, and no one of these schools dare take the lead in lengthening the course of study required for a degree because, forsooth, some of their

students would leave them and go to another school where they could graduate with less instruction. Louisville's schools, with all the facilities the city affords, are doing very little to elevate the profession when their strongest appeal for students rests upon the brevity of the course, after which they can receive the degree of M.D. One result of this method is that so many men are graduated before they are fit to practice, that several States refuse to license a man to practice medicine within their boundaries unless he has taken three courses of lectures extending over a longer period than any of these schools require, and the foolish youth who has caught at the bait of a short course and a speedy entrance into practice finds he has to lengthen his course of study, or is barred from practising. The old sayings that you cannot get something for nothing, and that the best is the cheapest, apply to medical schools as well as to commercial transactions. This is right. When everything else on the footstool is advancing, why should the profession of medicine retrograde? There are Northern schools as well as Southern to whom the same reproach belongs. If any man could afford to compress his studies into a short period, he it is who has by previous study fitted himself to grasp and absorb new ideas speedily, but examination shows that these are the men who go to Yale where the course covers one hundred and two weeks; or the University of Pennsylvania, ninety weeks; or the College of Physicians and Surgeons, New York, one hundred and eleven weeks; or Harvard, requiring one hundred and twenty weeks of study before the degree of M.D. can be conferred.

Spelling cannot be taken as a fair test of a man's education, for some of our great men of former days were poor spellers, but the following words occurred as they are spelled in a medical article by a doctor (?) who graduated at a Kentucky school in 1889: "Bin (been), uper (upper), musle (muscle), wher (where), characterised (characterized), resent (recent), la gripe (la grippe). The school that graduated this Solon among doctors advertises largely, and states that it is "unsurpassed." Indeed, it is in certain directions. Witness the defects in writing English made by one alumnus.

These quotations may seem invidious and specially directed at Kentucky schools, but the evil is not so limited—New York and Pennsylvania, as well as many Western and Southern States, are equally at fault.

Now, what is the remedy? It is what is being sought by the American Academy of Medicine and by the majority of those interested in the Association of Medical Colleges, and it is as sure to come as the end of this century, which I trust it will anticipate. It is the requirement of at least a *thorough* common school education preliminary to admission to a medical school, and three terms of not less than six months each of study and recitation, as well as of listening to routine lectures.

He who enters the practice of medicine with less preparation than this will find himself frequently handicapped when he comes into competition with men who are better prepared, and it goes without saying that this study must not only precede graduation, but must be continued through life, if one does not wish to be relegated to the obscurity of a "man not up with the times."

Now, I do not mean to say that the Association of American Colleges has not been formed, but a large number of the colleges represented were prepared to withdraw from the Association if the condition of a

longer period of study were insisted upon, so that the definite consideration of this question has been laid over until next year, and the Association enjoys a temporary existence until a satisfactory constitution and by-laws can be prepared and adopted. It is to be hoped that during the intervening months the short-term colleges will see the advisability of extending their courses, and will come together next year prepared to acquiesce in an agreement to lengthen their courses and raise their standing. Thus and thus only will it be any credit to a college to belong to the Association.

With this prospect of seeing the profession restored to its former high position, and all who have the degree of M.D., men of education, to whom can safely be entrusted the priceless treasure of human life, it behooves medical editors and those who sit in high places and mould medical opinion, to constantly bear in mind these two organizations, and lend them a helping hand whenever it comes within their power.

918 FOURTEENTH STREET, N. W., WASHINGTON, D. C.

The Polyclinic.

COOPER HOSPITAL (N. J.) NOTES.

VAGINAL PESSARIES.

THERE are uterine conditions in which the use of the vaginal pessary proves both painful and injurious. When the cervical canal is badly lacerated and the uterus hypertrophied, retroverted and retroflexed, the introduction of a pessary into the vagina will not give satisfactory results. When cases of this kind are of long standing, the angle of flexion is but slightly, if at all, affected by a pessary, on account of the plastic state of the uterine wall at the angle of flexion, and also on account of intra-abdominal pressure. The retroversion alone is affected. The congestion of the uterus, dependent in part on the interference of the circulation at the angle of flexion is not relieved; the consequent hypertrophy is not reduced, while the pessary itself irritates and still further inflames the lacerated and exposed cervical canal.

Curette the cavity of the uterus, especially at the angle of flexion; subdue congestion and inflammation by intra-uterine medication; restore the lacerated cervix by an appropriate operation, and the weight and size of the uterus will become so reduced that a vaginal pessary will not be required to retain it in position.—*E. L. B. Godfrey.*

STATE BOARD OF HEALTH OF PENNSYLVANIA.—**PRECAUTIONS AGAINST SUNSTROKE.**—*Causes.*—This dangerous illness is caused by excessive heat of the blood (from 100° to 110° Fahr.), which produces great depression of the nervous system. It occurs during the hot season of the year, and usually to those exposed to the hot sun, but it sometimes occurs at night, and also to those exposed to great heat, in glassworks, laundries, furnaces, bakeries, iron foundries, and the engine-rooms of steamships. It is largely confined to the hot, close streets and passages of the cities, but is not unknown in the country. Those habituated to the use of alcohol, and the debilitated, are especially predisposed to attacks.

Precautions.—Dark, close-fitting clothing and such as compresses the chest and neck should be avoided during the heated term. For those obliged to labor in the sun, light clothing and a straw or light felt hat, permitting free circulation of air, are preferable.

On very hot days, one should drink frequently, but in small quantities. A large amount of ice-water, cold beer, soda-water, mineral-water or other iced drink entering the stomach at one time, is injurious.

Cool water, into which oatmeal has been stirred, is a safe and refreshing drink. Water should not be drunk in considerable quantities at a lower temperature than spring water, namely, 56° Fahrenheit. Immediate death is often caused by "ice cold" drinks. The immoderate use of alcoholic beverages is also dangerous.

The sleeping-room should be freely ventilated and cool. Constipation of the bowels should be avoided. When over-heated, work slowly, frequently cooling the head, chest and back with cold water. Keep a wet cloth or some green leaves in the hat on the head, frequently wetting them with cold water. When, on a very hot day, the skin becomes dry and uncomfortably hot, a burning sensation is felt in the head, and the face is flushed and the eyes blood-shot with frequent tendency to urinate, the person should immediately quit work, retire to a cool place and rest in quietness; and if not speedily relieved from sensation of heat, take a cold bath.

Symptoms.—The attack may be very sudden and take the form of delirium in which the patient rushes wildly about and may attack those around him; or he may become weak and sink to the ground as if in a fainting spell or stupor. Loss of consciousness and mental disturbance may be only partial. Nausea or sickness at the stomach often precedes the onset. Convulsions may occur.

Sunstroke must be carefully distinguished from heat exhaustion, in which the general symptoms are similar to those of sunstroke, but the bodily temperature is below the normal. The difference can be at once recognized by feeling the skin underneath the clothing; in sunstroke the skin feels burning hot; in heat exhaustion it is cold.

Treatment.—1. Carry the patient into a cool and shaded place, where there is plenty of pure, fresh air.

2. Strip his clothing to the waist, and place him in a recumbent position.

3. Pour cold water (ice-water is best) upon his head and chest until consciousness returns. The points at which the blood may be most effectually cooled are the wrists, the temples, and the ears, because at those points it approaches the surface more nearly in considerable quantities. Ice may be applied to the head and chest and rubbed over the body, but if the skin is cold no ice should be applied. Internally, small doses of brandy may be administered with success; but in all cases of sunstroke the patient should, as soon as possible, be placed in charge of a competent physician.

The patient should do no mental work for some months, and should keep free from all excitement. Persons who have once suffered from sunstroke are liable to a second attack. Insanity, in some of its varied forms, frequently follows sunstroke.

In heat exhaustion give alcoholic stimulants and place the patient in a hot bath, so as to raise the bodily temperature.

DON'TS.—We have had "don'ts" of nearly every description; for the doctor, the druggist, and the obstetrician, until one's life is so hampered with "don'ts" that it would hardly be worth the living if one attempted to remember and obey all the "don'ts."

Don't write any more "don'ts."

The Times and Register

A Weekly Journal of Medicine and Surgery.

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A PESSIMISTIC VIEW OF MEDICAL MATTERS.

SCHOPENHAUER, the admirable pessimistic philosopher of Germany, whose work is just becoming understood and being popularized long after he has been dead, wrote that a professorship enabled one to become known to his contemporaries, and thus often the unmeritorious are able to indulge in false reputations. The intense conservatism of the colleges resist innovation, and many thousands of original workers who can set the world hundreds of years ahead, have thus been throttled and kept in the back ground by the same spirit that incarcerated Roger Bacon, the phenomenal chemist, and cut him off from the world the better part of his working life. It does not seem to "pay" in the popular estimation, to encourage scientific research to a very great extent, and wherever funds seem to be available for the purpose, pretense to knowledge elbows its way to it. It is but a different expression of the universal law that "the crows will gather where the carrion is."

In our medical journalism it is distressingly evident that mediocrity and ignorance are at a premium. The lay press have the superstitions and preconceptions of the multitude to pander to; the average medical journal caters too often to the low grade information of its subscribers. A good, solid, heavy, well-digested, laboriously gotten up article, such as could be written by a student who is saturated with his subject, enthusiastically devoted to it, and who had made sacrifices to compass the knowledge involved in its construction, would be thumbed over rapidly by the "busy practitioner" who has no time for anything but business; and so it befalls that hypocrisy is as rife in our medical journals and colleges as in society and churches. The demand of the present day is for demagogues, political, social, clerical and medical, but, perhaps, in the life-time of our children that demand will cease and the coming generation will inaugurate a better state of things.

S. V. C.

LAUDER BRUNTON'S ADDRESS IN MEDICINE.

THE address in medicine before the British Medical Association this year was given by Lauder Brunton. After a few preliminary remarks, he touched upon the advances due to the experimental method. By this, most of our recent knowledge has been acquired; and by it the teaching of medicine has been greatly altered. The greatest advance has been in the accumulation and co-ordination of facts, instead of theories. Medicine has been profoundly modified by the general acceptance of Darwin's great principles.

The medical student has also changed greatly, and the Bob Sawyer type has become obsolete. Probably in no class can be found so many gentlemanly, thoroughly educated, and hard-working men as among the medical students of to-day. He dates the change from the enforcement of preliminary examinations before entering the study of medicine.

He then adverted to the severity of the struggle for existence in the profession at present, and looks for relief to the exaction of a five years' curriculum, which is, in fact, necessitated by modern requirements.

The apparent changes in disease he attributes to greater accuracy in diagnosis—by which the heart is now charged with deaths formerly attributed to apoplexy; cancer, with those once classed as dysentery, etc. Typhoid fever has, however, grown more prevalent, probably from the extension of the sewage systems. Typhus has become rare; pyemia, thanks to Lister, is very greatly lessened in virulence.

The greatest progress has been in the department of fevers, even though Ferrier's localization of the cortical centers, in the brain of monkeys, opened a new era. The dependence of the essential fevers upon microbes, the chemical germicides and antithermics, the habitual use of the thermometer, and the studies upon the nature of fever, are duly mentioned. The necessity for the elimination of the waste products of excessive combustion, gives the reason for salutary rules of practice already formulated by the older physicians.

New methods share the credit with old ones, whose use is better understood. Good came out of evil, when the high price of quinine led to the search for substitutes. Small things intelligently considered, may lead to the results not small; as when Pasteur's researches on the differences in the shape of tartaric acid crystals led up to the whole work on fermentation; and thence to that on micro-organisms. Then came the study of microbes and their enzymes; their connection with disease; the variability of virulence produced in disease germs by cultivation; cultures; the struggle for existence amongst microbes, that between microbes and the organism, and between cells in higher organisms. Phagocytosis he likens to a bayonet charge in a battle; the main fight being carried on by bullets from a distance. The separation of the microbes themselves from their toxic products is just alluded to, as well as their analogies

to pepsin and trypsin. Bodies innocuous or even useful in their own place become most deadly poisons when they get out of it. The thyroid and thymus glands yield a proteid that, injected into a vein, coagulated the blood so instantaneously that the animal died as if struck by lightning, while peptones prevent coagulation altogether. One albumose may neutralize another, becoming inert when either alone is toxic. The protective action of albumoses forms the basis of Pasteur's treatment of hydrophobia. The complex processes of digestion begin to be comprehended. The pancreas of a fasting animal will not digest fibrin, while the pancreas of an animal killed during full digestion will do so rapidly. Yet the fasting pancreas contains zymogen and, if treated first with acid and then alkali, it becomes active. And while the pancreas pours into the digestive canal a ferment that will form sugar, it is also pouring into the blood another ferment that will destroy sugar.

Immunity is probably a very complex condition; but we can understand that a microbe once entering the system can produce an albumose that is toxic, while the injection of a neutralizing proteid might save the animal. Thus, a mouse dies of anthrax, while a rat resists it; and if a few drops of rat-serum be injected into the mouse, the latter resists anthrax as well as the rat. A similar protection is conferred by a proteid isolated from the rat's spleen. As goats are immune against tuberculosis, and dogs nearly so, the serum of these animals has been injected into human beings affected with tuberculosis. The experiments with goat's blood have been given up; but those with dog's and goat's serum, in doses of 15 to 20 minims, at intervals of several days, are still under trial.

Can the removal of a portion of serum from the body, and introducing it after some modification, produce immunity? Blisters are valued highly in many diseases, and derivation may not be their only mode of action. It would be worth while to note if the same effects follow when the bleb is unbroken as when it is opened. Bleeding may act in a similar way, or purgation. Such speculations indicate lines of experiment; until thus tested they should neither be accepted as true or scouted as absurd. Antisepsis furnishes a good example of this. The knowledge of epidemic disease-causes enables us to take rational precautions against them, instead of slaying persons suspected of poisoning the wells.

The anti-vivisectionists receive a little attention. The comparison of the *Pharmacopœia* of 1867 with the present one shows what we owe to vivisection, since to it is mainly due our power to lower temperature, to lessen pain by the new analgesics, to relieve insomnia without recourse to morphine; while the true action of the cardiac drugs has been revealed by the experiments of Traube and Brunton.

The future of pharmacology promises well, since we are beginning to know the relationship between chemical structure and physiological action.

The address closes with some remarks upon the training of medical students. It is extraordinary to

find that at the time when chemistry is becoming most essential to medicine, examining boards should reduce their requirements on this branch to a nominal degree. Training in practical physiology has given the student a basis for his medical studies such as anatomy gives to surgery. Dr. Brunton bears testimony to the eagerness with which students avail themselves of such opportunities for practical instruction, and says this habit of work remains in after life.

We regret that we cannot give our readers the full text of this address. Coming from one of the most active workers in the field, every line is suggestive, pointing to work continually in progress, of such importance that the veriest dawdler about the gates of the temple of medicine cannot but become interested in it. There is just enough of the retrospective to remind the reader how much the last quarter-century has produced, and keep him from growing pessimistic over the unresolved remainder. Of the failures there is no word. They have done their work in clearing the ground.

Annotations.

THE *Southern Clinic* has come out in favor of admitting to medical societies the graduates of sectarian medical colleges, provided the individuals applying for admission are qualified, professionally and morally. THE TIMES AND REGISTER has repeatedly urged the wisdom of this course, and we are pleased to see that it is receiving some attention from our editorial brethren. Surely, in these later days, an act of simple justice such as this cannot encounter prejudice strong enough to defeat it.

TYPHOID FEVER IN EGYPT.

IN the *Dublin Journal of Medical Science*, Brigade-Surgeon Albert A. Gore contributes an analysis of 105 cases of typhoid fever treated at the Alexandria Hospital during 1890. These were nearly all in young soldiers and sailors; selected men, who had passed their physical examinations, and had not been long in Egypt; consequently of the class in which the best results were to be expected. The average age was a little over twenty-one years; the disease most prevalent in eight to eleven months after arrival in Egypt. Out of 105 cases there were 20 deaths, a mortality of 19.05 per cent. There were 25 relapses; 3 second relapses; 1 third relapse. In 18 cases there was constipation; in the great majority the stools were "light yellow," in a few dark green and offensive. Profuse diarrhœa was exceptional. Hemorrhage [presumably intestinal] occurred in 6 cases, 3 of which were fatal. Perforation proved fatal in 2 cases. "Three-fourths of the attacks came under the heading of mild typhoid." The sick-room hygiene was not well attended to, as "4 of the cases were men who contracted the disease while in attendance on the sick." In 3 or 4 cases convalescence was marred by the occurrence of lymphangitis, affecting one leg. Of the fatal cases, 2 showed a temperature of 107° or over; 12 of 105° or over; 5 of 104° or over; 1 of 103.6°. Prominent symptoms in these fatal cases were diarrhœa, delirium, restlessness, and exhaustion. The treatment consisted of: "Carbolic and iodine antiseptic mixture, antifebrin, digitalis, ammoniac mixture, cold

sponging, milk, Brand's essence, beef-juice, stimulants; for complications, that most suitable to each. When there was a constant tendency to high temperature, the cold bath had only a passing effect. Quinine was scarcely used. Mortality, 19.04 per cent.; considerably less than 28.7 per cent., the death rate recorded by Liebermeister at Basle, when no specific treatment was adopted, but nearly double that when the complete antipyretic treatment has been carried out. All modern experience is tending towards the value of a complete antipyretic course, and the administration of such drugs as will at the onset of the disease inhibit the development of the pathogenic microbes so far that the disease may be aborted, and that at any period over-production of the chemical toxins may be prevented, and the fever made to run a mild course. The quantity of milk should not exceed two and a half pints—in cases of hemorrhage should be prohibited absolutely, and Brand's essence substituted, or raw meat-juice. Overstimulation in the early stage is most injurious; many cases do well without any intoxicant. Barley-water is probably the best of the diet drinks; whey is also good. There was always abundance of ice, and most skilful nursing. I have never seen a case of perforation recover, but some bad cases of hemorrhage have done well under the following treatment, viz.: absolute rest, Brand's essence, a large ice-bag to the abdomen, ergotin, opium; when the pulse becomes accelerated, digitalis, aconite; later, raw beef juice well on into convalescence; a sheet thrown across the body and a blanket over the feet. Smothering up patients in typhoid with blankets should be avoided. Yet how often is it done!"

Compare this record with that lately published by Dr. Waugh, of 100 cases without a death.

Letters to the Editor.

KRAUROSIS VULVA.

MRS. M., aged thirty-nine, mother of ten children, came to me in January, 1891, to seek relief from the above, of nineteen years' standing.

Family history good; in fact, she was always very robust till her first child was about one year old, when she noticed great pain and burning on urinating; also there was excruciating burning and itching at all times of labia minora, inner surface of labia majora, and same condition extended two inches into vagina on its anterior wall.

The sensitiveness was so great at times that for weeks she had to keep her room, and an examination was almost barred by it. For so great was it that she would flinch on slightest touch of vulva, as if I had touched the nerve of a very sensitive tooth.

It was quite a task to introduce a catheter (to wash out bladder), as the touch of the vulva in its introduction would cause spasm of urethra, and an attempt at removal would elicit another spasm, causing walls to cling tightly to instrument.

When she would be four months pregnant all these symptoms would leave her, and as she expressed it, "These were her best days."

She would be free and apparently well till child was about one year old, when all former symptoms would return.

Examination revealed nothing abnormal of womb, ovaries, etc. The only thing found was the above condition, with the mucous membrane of vulva of a dark purplish color.

She also had a cystitis, chronic, due to wilful retention of urine to avoid its terrible burning, as she admitted.

She, like the woman who had the issue of blood, "had suffered many things of many physicians," all but one had told her she could not be cured.

First, I removed the cystitis with salol, extract buchu fluid, potass. acetate, and washing out bladder with water and boracic acid. But that burning, itching, sensitive vulva, like Banquo's ghost, "wouldn't down."

I reported the case to Dr. Waugh, and he sent me, a copy of THE TIMES AND REGISTER describing a similar case; and from it I concluded to use local applications to vulva of Churchill's tr. iodine. I prepared it somewhat stronger and omitted the alcohol.

After mopping the parts dry with absorbent cotton, I applied the iodine till the parts were jet black, and repeated it twice a week.

Caused great pain, but this would pass off in an hour's time; but when she would disobey my command to keep quiet for half a day afterwards, and do much walking and get overheated, it would make her almost raw.

From the very first application she felt relieved, and grew gradually better, and at present is a well woman (*and she is not pregnant.*) Able to pick four buckets of cherries in an afternoon, and do all the work for the family, as she has no help.

W. FREDERICK, M.D.

AVONMORE, PA.

DOUBLE PLACENTA WITH SINGLE CHILD.

H. C., primipara, twenty-five years old, gave birth to a perfectly formed, though rather small and emaciated female child. The delivery was normal and not very tedious. After pains commenced soon after delivery of child, lasting only a few seconds, reappearing at intervals of half an hour, and were not of sufficient intensity to expel the placenta. On examination of the abdomen, I found on either side and about one and a half inches below the umbilicus a triangular semi-solid mass, which I judged to be the placenta. Traction on the cord showed the placenta to be still adherent, and for fear of post-partum hemorrhage I thought it safest to wait till the placenta was sufficiently loosened to remove it with ease. After a wait of four hours, finding the placenta to be still immovable by traction on the cord, I made a vaginal examination, and found an abnormal large mass at the cervix. On removal of it, I found it to be a *double placenta*. Both placentas were complete, and joined by a membrane in the middle of which the umbilical cord was inserted. As no sign of any twin was found, I think this case to be of sufficient interest to report it. The child is perfect in every respect and shows no signs of malformation.

HERMAN MARCUS, M.D.

PHILADELPHIA, PA.

Book Notices.

ATLAS OF CLINICAL MEDICINE. BY BYRON BRAMWELL, M.D., Vol. I, Part 1; Edinburgh. Printed by T. & A. Constable, at the University Press, 1891.

We have before us the first part of a work that deserves more than the brief notice that is usually all we can spare to books from our crowded columns. Each yearly volume is to consist of four fasciculi, with thirty plates. The Atlas is to be sent to

subscribers only, at a cost of £ 1, 11 s., 6 d., in advance. The first part treats of myxœdema, sporadic cretinism, myxœdema and exophthalmic goitre contrasted, and Friedreich's ataxia. This part contains 48 folio pages, printed on heavy paper, and illustrated with three colored lithographs, two black-and-white, one tinted crayon, and one photogravure, all full page, besides a number of smaller cuts.

In the article on myxœdema the author gives a very good digest of the subject, mentioning the acute cases described by Ord and Charcot, the report of the Clinical Society of London, Hun and Prudden's statistics, etc. Dr. Bramwell believes that myxœdema is much more common than the reports would indicate; and this is undoubtedly correct. Following is the description of the cases depicted in the plates, and a page is devoted to a scheme for the clinical investigation of cases of myxœdema.

Sporadic cretinism, the infantile form of myxœdema, follows naturally, with a tabular statement of forty-four cases; and the subject is rounded out by a contrast of the symptoms of myxœdema and those of exophthalmic goitre.

In the next chapter the description is given of a case of Friedreich's ataxia, exhibited at Dr. Bramwell's clinic. The report is apparently from shorthand notes, including the conversation between the teacher and the class. While this is a good way to enliven a lecture, it is out of place in a work like the present; that is to go to a class of readers who may be considered above the need of such expedients. The differential diagnosis between the two forms of ataxia is illustrated by a series of cuts representing sections of the cord. Illustrations are also given of the spinal curvature, and pedal deformity.

We regret that we cannot give the cost of this admirable work when delivered in this country. The subscription price given is very small, considering the character of the work and the execution of the plates.

The Medical Digest.

SUPPOSITORIES FOR CHRONIC PROCTITIS:

R.—Iodoform..... x grs.
Olive oil..... 3j.
Cocoa butter, q. s.

For ten suppositories. One each night. Very successful.

—*Med. Press.*

FOR ACUTE LARYNGITIS.—

R.—Potassii iodid.
Potassæ chlorat. pulv..... āā 3j.
Aquæ destillat..... f 3j.
Syrupi..... f 3j.

M.—S. A teaspoonful every hour.

—*Southern Clinic.*

BONE-GRAFTING IN THE SKULL.—At the Académie de Médecine, M. Ricard, presented a patient from whose frontal bone a large fragment had been removed for a sarcomatous growth. The breach of bony surface had been, at the time of the operation, repaired by the transplantation of the iliac bone of a dog, strict antiseptic rules having been observed. Immediate and complete union occurred, without pain or any reaction. The patient was discharged on the tenth day, and now, three months and a half after the operation, the bony union is as firm as ever.

FOR CROUP:

R.—Syr. garlic..... 3j.
Tr. lobelia..... 3ij.

M.—Sig. Give from 20 drops to a teaspoonful of the syrup, adding from 5 to 20 drops of the tincture, according to age.

This is a favorite with Prof. Garretson, from whom I got the idea:

R.—Syr. prunus virg..... 3ij.
Syr. senega..... 3j.
Fl. ext. jaborandi..... 3ij.

M.—Sig. A teaspoonful every two or three hours.

As an emetic I find alum and molasses the best; make it thick, and give a teaspoonful or two followed by cold water.—Blackwood, *Med. Summary.*

TONSILLOTOMY.—We are justified in drawing the following conclusions:

1. That the only reported case of fatal hemorrhage needs further corroboration before it should influence the usefulness of tonsillotomy.

2. That age is of all other conditions the most prolific cause of hemorrhage.

3. That the early removal—that is, before the tonsillar tissue has become hard and fibrous—will reduce the probability of an alarming hemorrhage to the ratio of one to all the reported cases of tonsillotomy.

4. That if the operation is skilfully performed with a tonsillitome, and the throat subsequently properly cared for, the probabilities of even a slight hemorrhage are very small.

—Fitzpatrick, *Lancet-Clinic.*

SARCOMA.—I. Indolent, hard or elastic lumps in the skin, glands, fasciæ, nerves or muscles, ought to be removed early and completely. If they return they should be removed, as long as *complete* removal is feasible.

2. Tumors of bone, especially central tumors, should be removed as soon as the differential diagnosis from tumor albus, aneurism and other tumors is made. If the tumor occupies the proximal epiphysis, exarticulation is called for.

3. Sarcomas of very rapid growth offer a very poor prognosis; if they, besides rapid growth, also exhibit the characteristic quality of softness, being either pure white or pigmented, operative interference should be declined if the operation in contemplation must be great and in itself a source of danger or suffering.

4. Only sarcomas that can be completely removed should be operated upon.

5. Metastatic sarcomas should not be operated upon.

6. Recurrent sarcomas in the region of original tumors should be removed if feasible, provided no metastatic tumors are present. Especial attention should be paid to the examination of the lungs.

—Hoegh, *N. W. Lancet.*

TREATMENT OF TYPHOID FEVER.—Dr. Tordeus has been employing with considerable success a treatment for typhoid fever in the St. Pierre Hospital, Brussels, which consists essentially of moderate doses of an antipyretic combined with an antiseptic. Thus 10 grains of acetanilid and an equal quantity of resorcin, or about half that amount of thymic acid, are made up into a 5-ounce mixture with a compound decoction of aloes, and tablespoonful doses administered every three hours. This was found to exert a remarkably beneficial effect not only on the temperature, but also on the general condition of the patients. From trials

made with acetanilid alone, it was evident that the antipyretic effect was almost entirely due to the combination with it of the resorcin or the thymic acid. Several children were included amongst the patients so treated, the doses given being, of course, proportionately smaller. Dr. Tordeus is of opinion that treatment of a similar description will be found suitable in other zymotic diseases; indeed, he has tried a combination of acetanilid and benzoic acid in measles and in croupous pneumonia, the latter drug being selected in preference to resorcin on account of its possessing expectorant as well as antiseptic properties.—*Lancet*.

HYDROPATHIC TREATMENT OF MEASLES.—Dr. Julius Fodor, director of the Vienna "Wasserheilanstalt," reviews the past and present treatment of measles, and considers that many of the older ideas of pathology are being confirmed. We are unable yet to decide whether it is due to a central or peripheral cause, as many foreign bodies or drugs when incorporated with the body will produce a similar efflorescence as quinine, antipyrin, tuberculin Kochii. Idiosyncrasia is not always present for urticaria appearing in eating a particular food, as in strawberries, crabs, etc. He has often eaten strawberries himself without any appearance of rash or other effects from them, but last year, while residing at the same place, indulged in a few and was suddenly seized with a severe attack of urticaria. Of the same bushes he again partook and the attack was repeated. Since then he has often taken the same fruit and no eruption has occurred. From this he reasons that the eruption does not always depend on the irritation of the fruit.

The latest hypothesis of ptomaines, leukomains, and other toxines leads us back to a "pollution of the fluids" and "blood cleansing" treatment, more euphoniously expressed at the present time by elimination with sudorifics, cathartics, etc. With this object in view Fodor contends that the hydiatic treatment supersedes all others in the treatment of measles. His method is to wash the entire body with water 40° C. He performs this abolition in bed by placing a waterproof sheet under patient, after which the temperature of body is slightly reduced, the heart improved, the nerve system stronger and more active, and the digestive organs put in a more normal condition by the reflex thermal action on the skin. The writers and lecturers on this treatment draw a distinction between the "hydiatic" and "hydropathic" treatment, the latter being termed antiquated.

—*Med. Press.*

SPINAL INJURIES.—If your patient is really suffering from a spinal lesion, you may expect to find one or more of the following *objective* symptoms to exist, to wit:

1. Emaciation. Generally most noticeable in groups of muscles deprived of normal nerve stimuli.
2. Fibrillary twitchings and tremors of individual muscular bundles.
3. Flushings, generally confined to face or upper portion of body.
4. Heart and pulse conditions, if abnormal and not existing before injury, may reasonably be referred to the injury.
5. Ephidrosis, indicating a depressed nervous condition.
6. Cold extremities, a symptom not possible to feign.
7. Cyanosis.

8. Pupillary dilatation, indicating nervous irritation.

9. Condition of reflexes.

In conducting the examination in medico-legal cases avoid leading questions.

It is my custom to let patients describe their symptoms or tell their story without the least suggestion from me. It is your duty to ascertain if your patient has read any work upon spinal injury since the accident, and before arriving at a definite diagnosis consider the patient's former character, especially as to veracity.

I believe it well to make repeated examinations, as different examinations may reveal widely different results.

In conclusion, you will find it impossible to arrive at your diagnosis from any one or any two symptoms, but rather from the aggregate phenomena that go to make up the clinical picture.

—Millard, *N. W. Lancet*.

THE TREATMENT OF EPILEPSY.—The treatment of idiopathic epilepsy has never reached beyond the palliative stage. Notwithstanding the rapidly increasing number of remedies which have been brought to the attention of the profession, this disease still remains the same as it has for generations. The bromides have been used, and they are now advised in such cases, until the patient is thoroughly brought under the depressing influence of the drug, but nevertheless a "cure" is the exception and not the rule. At the present time, if the total amounts of the medicaments are considered, the combination of one of the bromides with antipyrin seems to promise the best results as a mere palliative. Antipyrin and ammonia bromide, with simple elixir as a vehicle, in many cases which have proven rebellious to large doses of bromides and other anti-spasmodics, may be depended upon to produce marked benefit in a large majority of cases. When beginning this line of treatment, it will be well to administer 10 grains of each three times daily, either as just indicated or with tincture of horse-nettle a drachm or two, and later, the dose can be gradually decreased until but 5 grains of the different substances are taken three times daily.

The writer has been making some observations in this class of cases, and has arrived at the conclusion that in addition to the treatment named, it will be possible to combine certain remedies with a view to effect important changes in the portion of the brain tissues from which the seizures proceed, and he hopes at no distant day to be able to announce that epilepsy is a curable disease. Sufficient time has not yet elapsed to warrant positive statements in regard to the line of medication to be followed, but reasoning from analogy, there is good reason to be most sanguine that ultimately such treatment will prove effective.—*Med. Summary*.

PROGRESSIVE BULBAR PARALYSIS; PROGNOSIS AND TREATMENT.—The prognosis in these cases, as in all degenerative changes in the brain and cord, may be viewed as having an unfavorable future result. There is no drug known to us whose property can check or lay the advance of the disease. When we attempt to treat the malady it must be *nur solatii causa ut aliquid fiat*. The most rational method is the electric treatment which, though long in use, still offers the best result. The galvanic and faradic currents may be used alternately, or the one constantly as the patient can bear it. The electrodes are placed

on each mastoid process and the current allowed to pass through the medulla. Two or three minutes daily is quite enough of this treatment, the paralyzed muscles may also be galvanized and faradized to check the atrophy. When the paralysis has extended over the constrictors, the galvanic current should be regularly applied, as different clinicians speak highly of this treatment.

With this object the anode should be placed on the neck and the cathode on the side of the larynx. With every cathodic closure, with a moderate current, a reflex movement will take place in the pharynx. In the advanced stage of this disease, the principal difficulty will be in the nutrition of the patient, where the swallowing muscles will be so paretic and atrophied as to endanger the patient's life from the food passing into the wrong channel, which usually must be performed artificially.

Pneumonia by foreign bodies is easily induced in these patients, and the sound or the probang should always be at hand to avert any danger that may arise. Along with the electric treatment may be advised the removal of a patient to a salubrious hydropathic institute, where proper application of cold water is of considerable value. Of internal drugs I know of nothing among the great number recommended that is of any nominal value. If, however, I were to recommend one to you I might say iodide of potassium or ergotine. Some recommend argentum nitricum, and assure us that they have seen favorable results. In the last stage of the disease, where we find the patient in a miserable condition, we may be forced to rely on morphine or some other narcotic drug to relieve the patient in his last suffering, and, if possible, to favor the euthanasia.—Nothnagel, *Med. Press.*

CAISSON DISEASE.—From the mass of evidence compared and studied, it seems evident that the pathology of the caisson disease is due to congestion and consequent malnutrition of all the internal organs, and especially of the spinal cord. This congestion is due in part to paralysis of the vessel walls from previous over-distention, and in part to the lack of *vis a tergo* of the blood-current, because the blood finds easier passage through the peripheral vessels, which have been partially emptied by the previous pressure. This comparative stasis of the blood causes a malnutrition of the tissues, which is manifested especially in the organ invariably found congested, the spinal cord.

The exciting causes are: Long-continued pressure, great amount of pressure, rapid removal of pressure, exhaustion and cold during the removal of pressure, and, possibly, evolution of gas, if the withdrawal of the pressure is very sudden, *i. e.*, one-half to one minute.

The predisposing causes are: Obesity, old age, alcoholic excesses, heart and kidney disease, lowered vitality of the body from any cause.

The pathological lesion of the cord, in most cases of paraplegia, is a disseminated myelitis, involving the nerve fibers, neuroglia, and blood-vessels of the white matter, especially of the posterior and adjacent parts of the lateral columns, and producing ascending degeneration of the columns of Goll and the direct cerebellar tract, and descending degeneration of the crossed pyramidal tract, and leaving the gray matter unharmed.

It has its seat in the dorsal region of the cord, because this portion is physiologically and anatomically the least resistant part of the nervous system, and attacks principally the postero-lateral columns, on ac-

count of some anatomical arrangement of the smaller blood-vessels not thoroughly understood.

—Van Rensselaer, *Med. Record.*

CASE OF GONORRHOEAL RHEUMATISM.—A. B.—, young man aged twenty-six years. When seen on September 1 he was suffering from gonorrhœa, with gonorrhœal rheumatism complicating, particularly the fibrous structures of the left instep, where he complained of great pain. Heart and lungs, normal; temperature, normal; pulse, rather feeble; tongue, very white; but he admitted having been drinking. He was treated for the gonorrhœa by injection, and hot poppy fomentations to the painful instep, the foot to be enveloped in soft flannel.

September 3.—When seen, all rheumatic pains had disappeared, but he had developed symptoms of delirium tremens, sleepless and wandering during the night, with hallucinations. Tongue, white; temperature, normal; pulse, feeble; very thirsty, and takes nourishment well. Ordered pills, each composed of a quarter of a grain of morphine hydrochlorate, one to be taken at once, another in six hours if the patient is not quiet. To take beef tea, with barley water to relieve his thirst, but no stimulants.

September 4.—The first pill had no effect, so in six hours—*i. e.*, at 5 A. M.—he took another, since which time he has been quiet. Taken a good deal of beef-tea during the night, and at midday he regained consciousness for a time, and answered a few questions. Pulse, weak; temperature, 101°. Pupils respond to light; very restless. From this time he sank into a state of muttering delirium, and died in the evening, despite the administration of stimulants; and before death his temperature ran up to 103°.

No post-mortem examination allowed.

The question which presented itself to me was whether to attribute his sinking into this form of delirium, followed by death, solely to the delirium tremens, or could the morbid process which had suddenly left the fibrous structures of various parts of his body have been accountable for his cerebral symptoms?—Leman, *The Lancet.*

TREATMENT OF RINGWORM.—Blistering the part once a week for several weeks when the patch is not large, has proved quite satisfactory. The object of the method is to produce an inflammation sufficient in the part to destroy the fungi.

The local treatment of James Foulis, of Edinburgh, or a modification of it as recommended by Dr. McArthur, of Chicago, has proven more satisfactory to me. A folded towel is tied around the child's head so as to protect the face and eyes from applications poured upon the head. The hair is cut short around the affected part; spirits turpentine is poured upon the patch and thoroughly rubbed in with the fingers. The turpentine cleans the scalp of scales, dirt and sebaceous material around the affected parts. The head is then washed with carbolated soap and warm water, and thoroughly dried with a towel. Tinct. iodine is then applied and allowed to dry. It is best to make two or three applications of the iodine. As soon as the part is dry, a 5 per cent. sol. of carbolic acid in olive oil is applied to the whole scalp. The treatment is applied night and morning.

Dr. McArthur's method is to first shave the hairs from and around the patch, then the part is thoroughly washed with green soap and warm water, after which spirits turpentine is thoroughly rubbed into the affected scalp, and then two or three coats of tinct. iodine painted on with a soft brush and allowed

to dry. The carbolated oil is then applied as above to the whole scalp. If either of these methods are properly practised it requires only about ten days to produce a cure.

Spirits turpentine is a powerful germicide, but it is a still more powerful solvent to the sebaceous material around the hairs. It penetrates deep into the epithelial structures of the scalp, and opens the way for the tinct. iodine, which is a still more active parasiticide.

It is said that these remedies act synergistically, increasing the parasiticide properties of each.

The child should be isolated as much as possible from other children and should wear a rubber cap.

After a case has been pronounced well, it is best to keep the child under observation for new patches, for a month or so, as a few escaped fungi may have located in some other portion of the scalp.

—Davis, *Denver Med. Times*.

SUPPOSED DEATH FROM PTOMAINÉ POISONING AFTER EATING TINNED SALMON.—On June 28, 12 A. M., I was summoned to a house in the neighborhood with a message that a whole family had been poisoned. On my arrival, I found six persons in bed—a lad twelve years old (since deceased), three daughters, mother, and the cook. Upon inquiring the cause, I ascertained that the six patients had all partaken for supper the previous night of tinned salmon, and after going to bed as usual were seized towards early morning with violent pains in the stomach, sickness, and diarrhoea. I first saw the daughters, whom I found apparently in great pain, rolling about their beds, with a temperature varying from 102° to 103°, pulse running from 110 to 160, respiration quick, pupils dilated, tongue dry and of a brownish color. I next saw the mother, who also complained in a similar manner, but with not quite such severe pain; she seeming to have recovered a little. I then saw the lad, whom I found in a semi-conscious and collapsed condition, with temperature 104°; pulse almost imperceptible; respiration very quick; skin cold and clammy; pupils widely dilated, and very restless—in fact, in a dying condition, fæces and urine being passed unconsciously. Dr. Barlow kindly met me in consultation, and we agreed that it was a case of poisoning, presumably from the salmon. In spite of all our efforts, after getting more restless, the boy gradually sank and died at three o'clock next day. At the necropsy all the organs were healthy with the exception of the brain, which was very congested on the surface, and the stomach, which was found to be in a highly inflamed condition, as were also portions of the intestines, one piece of which was inflamed to such an extent as to be almost in a gangrenous state. Dr. Luff, who kindly made an analysis of the above, has sent me the following report: Stomach highly inflamed, as if it had either been inflamed or attacked by some irritant substance previously to death; the intestines also were in a very inflamed condition, but no trace of any animal or mineral poison could be detected in either of the viscera. He also examined very carefully the solder round the tin and found it in a perfect condition, and also a specimen of salmon similar to that which was supposed to have caused the mischief was found to be perfectly fresh, and in good condition, and absolutely free from any poison that could be detected. I am pleased to say that all the remaining members of the family recovered. I think we may say that all the symptoms of the above case pointed to one of

irritant poisoning; and in the absence of any metallic poison being detected, the only explanation that can be offered is that it was one of those cases where death occurred from the presence of ptomaines.

—Murray, *The Lancet*.

"AN IMPROVED METHOD OF GRAFTING ULCERS."

—Having had an exceptionally large number of chronic ulcers of the leg, which incapacitated the patients from work, and finally brought them into the infirmary, I tried the ordinary methods of grafting, but being disgusted with the very large number of total failures I experienced, I undertook various experiments, and at last adopted the following plan, which I distinctly disclaim as my own, but which consists in adopting and combining the ideas of several people. The success I obtained with this method was so marked that I think a large number of practitioners at home and abroad (in India especially, where I found all ulcers very intractable under ordinary treatment) will welcome it. Even when the ulcer is deep, with hard thickened edges and extending all round the limb, the method applies. This is to cleanse the surface well for two or three days with boracic fomentations, and then (contrary to what I was taught) slightly abrade the granulations, just sufficient to cause oozing, and apply the graft directly to the abraded surface, where it is held in position by a small pile made of half-inch squares of green protective, four or five squares being placed one on the top of the other. A graft is thus applied to every square inch of surface. And now comes the most important thing of all, and which is an idea I received from a friend. This is to encircle the limb with a fold of carbolic gauze, which extends two or three inches above and below the ulcer, where it is attached to the sound skin by collodion. The ulcer is then thoroughly dredged with boracic powder through the gauze, and the whole is wrapped in a layer of wet boracic lint, which is kept thoroughly moist. As a rule, the dressing is not disturbed for three days, when the lint is removed, and the limb well irrigated with boracic lotion, the grafts remaining perfectly secure under their heaps of protective, which again is kept in position by the gauze. The limb is then redusted with boracic powder, and done up in the wet lint, which is now changed daily. At the end of ten days the gauze and protective are removed, and each graft will be found as large as a sixpence, while those near the edges will have exercised a spermatic influence, and caused a rapid ingrowing of epithelium. Since adopting the above plan, I may say I never lost a single graft, though employed on most unfavorable surfaces—a very different result to the old way of covering the grafts with a large piece of protective which retained some exudations under it, and thus bathed the tender graft in a poisonous medium, with a result that eighty per cent. of them never "took."

—Gill, *The Lancet*.

RESULTS OF TREATMENT OF REDUCIBLE HERNIA BY ALCOHOLIC INJECTIONS.—The original *modus operandi* of Schwalbe, who introduced this form of treatment in 1871, is slightly modified by Dr. Steffen, of Regensdorf (Zurich). A 70 per cent. solution of alcohol was used, and from 2 to 4 grammes of this fluid were injected around the saccus herniosus (hernial sac) after reposition of the hernia. The treatment was ambulatory; first one or two injections a week were made, then at greater intervals. Before being dismissed from medical supervision the patient

had to go without the truss which he used during the treatment. The time of treatment varied from one month to two years and a half, or more. In 293 cases there were 83 (62 per cent.) cures, 6 (48 per cent.) improvements, 9 (9 per cent.) of negative results. A cure was considered to have been obtained when, at least one year after dismissal of the patient, the hernia was neither to be seen nor felt during coughing or under intra-abdominal pressure, and when the patients, most of whom belonged to the laboring class, had been at their usual work for six or seven months. In 10 per cent. of the cases dismissed as cured the hernia returned, owing to various causes. The age of the hernia (*sit venia verbo*) was not without influence as to the result obtained, as will be seen from the following list:

Duration of Disease.	No. of Cases.	No. of Cures.	Percentage.
Hernia incipiens.....	11	11	100
Date, a few days.....	10	10	100
Under ½ year.....	44	41	93.2
“ 1 “.....	45	41	91
“ 10 “.....	120	101	84.2
“ 30 “.....	52	34	65.4
Over 30 “.....	5	4	80
Date unknown.....	6	3	50

Dr. Steffen comes to the following conclusions: About four-fifths of small and medium-sized reducible herniæ can be cured, the wearing of a truss becoming, in most cases, superfluous. The prognosis improves the younger the individual, and the shorter the time the hernia has existed. Incipient cases should, therefore, be treated by injections, and not left to the chance of a spontaneous cure under a truss. Ambulatory treatment, with pauses of from four to seven days, gives better results than daily injection whilst keeping the patient in bed. In most cases the patient does better to continue his usual occupation, wearing a truss during the time of treatment. This method is also adapted to herniæ which cannot be retained by a truss, the latter being able to be worn, and keeping back the hernia after a course of treatment. In a few cases only toxic effects (alcoholism, urticaria, vertigo) were observed.

This method of treatment is not entirely without danger; but accidents will be rare if due care is taken and regard paid to the anatomy of the respective parts.

For particulars I must refer to Dr. Steffen's paper in Nos. 12 and 13 of the *Correspondenzblatt für Schweizer Aerzte*.—Zangger, *The Lancet*.

THE ADDRESS IN SURGERY at the British Medical Association was delivered by Professor Chiene, of Edinburgh. Professor Chiene said he wished to take John Hilton as his hero, and as his subject, “Rest as a Therapeutic Agent in the Cure of Surgical Ailments.” Professor Chiene said he would speak of simple things as illustrating this. He would not attempt to define rest, or its opposite—unrest. Rest had a bodily and a mental aspect. We all knew it was not work, but worry—mental unrest—which killed, and a person would bear much physical discomfort to be relieved from it. Operations for cancer were often unsatisfactory, but they often gave mental rest to a patient by letting him think that no stone had been left unturned. There was a class of cases—syphilophobia, cancerophobia—in which the whole disease was psychic. A patient confined to bed often suffered as much from mental inactivity as from disease. The prescription, “Don't worry,” might with advantage be burnt, and “Do some work” take its

place. He had seen patients suffering from aneurism who had shown decided improvement by encouraging them to do some light mental work. In diagnostic incisions we had a valuable means of avoiding mental unrest.

He would not dwell on anæsthesia as a cause of rest, except to say that he still held that chloroform was the best anæsthetic. As a pupil of Syme, he felt proud that the Hyderabad Commission bore out the views of that far-seeing man. Cocaine was of great value as a local anæsthetic in adults. We must take care to employ a pure solution, and not to inject it into a vein. He used it either as a solution of salicylate of cocaine, or kept in pellets, and dissolved, when required, in camphor-water or distilled water; he never injected more than half a grain. In passing bougies, in phimosis, in tracheotomy, in fissure, and in simple cases of fistula in ano, in excision of tonsils, before injecting iodine in hydrocele, in small wounds of the face before stitching, he had found the drug valuable; also, used in the form of a bougie, to prevent urethral fever. He allowed four minutes to elapse after injection before operating. Pain given to a patient was a cause of mental unrest, and led to the loss of confidence between patient and surgeon; this was especially the case with children. In the dressing of a wound, the avoidance of movement was all important, and in this connection he could speak very confidently of the value of the many-tailed bandage. When writing this portion of his address, he counted one day, when going round his wards, the number of patients with this form of bandage on after operation; there were ten. In fracture of the pelvis the many-tailed bandage was infinitely preferable to the ordinary roller. A frequent cause of local unrest in wounds, and of the free serous oozing which accompanied it, was the use of unnecessarily strong antiseptics. Some years ago, a smart writer in a journal said: “Lister's arguments are getting stronger; his solutions are getting weaker.” He would have been nearer the truth if he had said: “His arguments are getting stronger, because his solutions are getting weaker.” Asepticism was taking the place of antisepticism. The main danger of contamination was from what was directly put into a wound (dirty instruments, etc.), rather than from what fell into it.

Another aspect of Hiltonism was the use of absorbable drains, so that dressing of the wound was not required in order to remove the drain. Lead splints steadied limbs after amputation and excision; shape the splint so that it can be unfolded without moving the limb. Apply your pressure firmly, but always leave a distal portion of the limb exposed, so that if it swells then the pressure is overdone and the bandage loosened. Horsehair stitches were valuable as combining rigidity and elasticity. The value of extension in fractures of the lower extremities was acknowledged; we must take care it was not overdone. It was not sufficiently often used in fractures of the upper extremity or after excision of the elbow or knee. In fractures, injuries, and diseases of the spine, in sacro-iliac disease, and in fractures of the pelvis, the use of double extension was of undoubted value. On the arrest of hemorrhage, Dr. Milne Murray had explained the action of hot water, and shown that the general shock and the local reaction were much less than with cold water; this well illustrated rest.

Professor Chiene gave several examples of the value of rest in rectal and vesical surgery. Gradual dilatation of the sphincter ani before operations gave

rest after the operation, as it was followed by a temporary paresis. In colotomy, the inguinal region was preferable to the lumbar, because mental worry was avoided by making an artificial anus in a situation which the patient himself had under command. Rest could be given to the bladder by fixing in it a gum elastic catheter (taking care that the eye of the instrument was just within the cavity), and attaching to the catheter an India-rubber tube, which passed into a vessel at the side of the bed. If the tube passed under water, and if the instrument and tube were full of fluid, there would be a siphon action which would remove the water from the bladder as it passed from the ureters. About a foot of fall was generally sufficient to keep the bladder empty; if the fall was too great, the mucous membrane was apt to be sucked into the eye of the instrument, causing pain and a stoppage of the outflow—the bladder filling with urine.

In tracheotomy, Hilton pointed out the value of rest to the inflamed larynx. In the treatment of cut throat, if we performed tracheotomy at once, and accurately united the wounded surfaces, we obtained more rapid healing, because the wound was not used as a funnel through which air passed to the lungs. In using a bandage for varicose veins, it should be applied before the patient gets out of bed, and taken off after he is in bed, so that the veins do not fill; the same rule should be followed in the application of a truss. Continuous gentle elastic pressure would often act most efficiently, painlessly, and restfully in reducing an irreducible hernia, a prolapse of the rectum, or a paraphimosis.

In concluding, Professor Chiene said he wished it to be understood that there was another side to the picture. Harm might be done from too prolonged rest. Mechanical rest must also, in some cases, be interfered with to obtain physiological rest. Massage interfered with mechanical rest, but it often got rid of effusions and relieved physiological unrest. It was a question whether we should not apply gentle massage in all fractures, so long as we could do so without displacing or causing movement between the broken fragments of the bone.—*Med. Record.*

GERMAN AND RUSSIAN NOTES.

HERMAN MARCUS, M.D.

OLEUM MENTH. PIP. ANGL. AN ANTISEPTIC.—Dr. B. Pientkowski claims of oleum menth. pip. angl. excellent results as an antiseptic, especially in chronic suppurations of the ear. Since 1888 he had twenty-six cases (some of twelve years' duration) of this kind under his care, which he succeeded in curing by applying this oil. His *modus operandi* is to wash out the ear with a warm 5 per cent. solution of sulphate of sodium, and then inject a solution of 5,000 ol. menth. pip. angl. in absolute alcohol (5.100). He then introduces a cotton tampon, saturated in the same solution, renewing it the next day. In tympanitis granulosa he anaesthetizes the mucous membrane with a 5 per cent. cocaine solution, then touches the granulations with liq. ferri muratici, after which he uses same treatment as above. He says that with such treatment, after ten to fifteen injections, the worst cases may be improved, even cured.—*Przegląd Lekarski.*

IODINE TRICHLORIDE IN SUPPURATION OF THE EAR.—Prof. Trautmann uses iodine trichloride in all suppurations of the ear. Owing to the action of this drug on metal, Trautmann constructed a glass syringe with piston packed with asbestos, which syringe can

be easily sterilized. He prepares a 5 per cent. amber-colored main solution, which may be kept for weeks. He uses with each injection about 6½ ounces of a ⅞ per cent. solution, (by reducing the 5 per cent. main solution) gradually increasing to ¼ per cent., ½ per cent., or 1 per cent. solution. This injection may be repeated once daily, but it will suffice to repeat it every fourth day, using other antiseptic lotions during the other days. The pains following the use of the iodine trichloride last from half to one hour, are very slight, and may be alleviated by injecting water into the ear right after using the iodine trichloride. The fetid odor due to the suppuration disappears, returning generally after twenty-four hours; but, continuing this treatment, this is soon entirely remedied. A second excellent quality of the iodine trichloride is that it helps to loosen the firm adherent epithelium as found especially in chronic suppuration of the middle-ear. A third excellent property is its prevention of inflammations. In perforations of the drum the iodine trichloride solution may enter the mouth or nose, in which case a disagreeable burning and scratching sensation is felt, which appears to be more intense in the nose. It is, therefore, advisable to bend the head backwards when injecting, so as to prevent the solution from flowing into the nose. Drinking of water will lessen the burning in the mouth. No symptoms of poisoning were observed.—*Deutsche Med. Wochenschrift.*

ARISTOL IN DISEASES OF THE EAR AND NOSE.—Prof. Buerkner (Goettingen) reports the following:

He used aristol in .86 cases of diseases of the ear, and found that in suppurations of the middle-ear the discharge was rather augmented than diminished. In large perforations as often found with chronic supuration of the middle-ear, he found that the discharge may be retained behind the powder which was blown in. In 8 cases out of 49, the discharge disappeared quickly, in 14 cases a slow cure was effected, in 10 cases the discharge was increased. In granulations of the auditory canal aristol acted at times very nicely. Furuncles were not improved with the use of aristol salve.

In affections of the nose Buerkner succeeded very well with the use of aristol.

The fetid odor in ozæna disappeared after using aristol insufflation for a number of days; the condition of the mucous membrane, especially where atrophy was present, was greatly and visibly improved. Ulcerative processes of syphilitic origin, as well as granulations, showed great tendency to heal after short treatment.—*Berl. Klin. Wochenschrift.*

CORTEX ET EXTRACTUM MONESIE (GUAVANHEM).—Rosanow (Hoskow), speaks highly of the astringent and expectorant qualities of the above preparation, in the treatment of catarrhal diseases of the respiratory tract and intestines, especially diarrhœa. He uses 30 grains daily of the extract monesie with excellent results.—*Wratsch.*

STERILIZATION OF CATGUT.—C. Brunner (Zuerich) recommends the following method for the sterilization of catgut:

Place for one to two days in ether, then place in xylol, using a preserve glass, and heat in a sterilizing apparatus for three hours, wash with alcohol to remove the xylol, and keep in a solution of 1 part sublimate, 900 parts absolute alcohol, and 100 parts glycerine. After three days the catgut is ready for use. Before using pass the catgut through a sublimate solution (aqueous).

—*Beitraege zur Klin. Chirurgie.*

Medical News and Miscellany.

A WESTERN physician is charged with an attempt to eke out his professional income by doing a little burgling. If he were not a better practitioner than burglar it is not to be wondered at.

THE death-rate for Chicago has shown a marked decrease since the cool weather has succeeded the hot spell. The number of deaths Monday, August 10, was 187; Tuesday, 118; Wednesday, 62; Thursday, 65.

A CURE FOR VIPER BITES.—The Academy of Medicine of Paris has awarded the Orfila prize to Professor Kaufman, of the Veterinary College, at Alfort, for a lotion for the cure of viper bites, consisting of 1 part of chromic acid dissolved in 100 parts of water.

BEQUESTS TO MEDICAL CHARITIES.—By the will of Hector C. Havemeyer, several medical charities will be benefited, as follows: Post-Graduate Medical School and Hospital, \$5,000; the Manhattan Dispensary and Hospital, \$5,000; Presbyterian Hospital, \$5,000.

PAYNE (*Brit. Journ. of Derm.*) relates that after using his thumbnail to remove softened warts, three warts developed on his thumb, confirming him in a view which he had entertained on other evidence that the popular belief in the contagiousness of warts is well founded.

THE *Weekly Medical Review* says that there is no outbreak of hostilities in St. Louis, and defines his own position as one of "armed neutrality." We are reminded of a big Switzer who once told us that he had very nearly gotten into a fight; in fact, he had been compelled to knock down three men.

THE Sixteenth Annual Meeting of the American Gynecological Society will be held in the lecture room of the Columbian University, corner Fifteenth and H streets, Washington, D. C., on September 22, 23, and 24, 1891. Physicians are cordially invited to be present. Many valuable papers are announced.

A RARE FORM OF URTICARIA.—Under the above heading "Viator" writes to the *British Medical Journal*: "I have lately seen a boy who invariably suffers from a form of urticaria whenever he touches with his fingers certain hairy caterpillars, especially the woolly bear—*odonestis potatoria*. The rash is not confined to the fingers, but is rather severe on the face. I should be glad to know if any of your readers have met with similar cases, and whether this is a recognized cause of urticaria. I can find no mention of it in any of the literature at my disposal.

BEER VERSUS WINE.—An investigation was recently made in Munich to ascertain the effects upon the health of excessive beer-drinking. The men and women who keep beer places in Munich, as the heaviest beer consumers in the world, were the subjects of such a medical investigation last spring. The average lifetime of persons in Munich who pass the twentieth year in good health is fifty-three years. The average lifetime for proprietors of beer saloons is 51.35; proprietresses of beer saloons, 51.95; brewers, 42.33. In the same city, inquiry has shown that the male proprietors of wine-rooms live but forty-nine years, and women who keep wine rooms but forty-seven.—*Med. Record*.

A SLIGHT reaction in favor of tuberculin is reported to have set in at Berlin. Prof. Ehrlich, who is to read a paper on the subject before the Congress of Hygiene, in London, next week, believes in the efficacy of the lymph. He says that he had tubercle bacilli in his sputum, but that they entirely disappeared after a few very mild inoculations.

If that health-reform dress is really constructed on hygienic principles, it will be received with favor—if it is pretty. And from what has been ascertained regarding this costume, there is no reason for believing that it is so very weirdly hideous. One or two of the designs look as though the gowns had been neatly fitted to a flour barrel or a hay-mow or a pump, but others are quite attractive. After all, there is something attractive in this reform dress—viz., the girl. That is why the new costume will become popular, if it ever does.

THE sick in their beds in Birmingham are said to be using the telephone for the purpose of enjoying church services, and its application to hospital patients is being considered. We shall watch this adaptation of a wonderful instrument. We would put our preachers on their guard against making the hearing of church services too cheap and easy. It may hinder that public attendance which is so comely. For the sick, indeed, such provision can scarcely be objected to, if care is taken to ensure easy disconnection. But for the healthy the luxury is too great.

FROM an article by Dr. Grebenshchikoff in a Russian hygienic journal, it would appear that the death-rate of Russian medical men is less than that of doctors in other countries, being, if the official sources of information are to be trusted, only 211 out of 12,212, or 17.4 per 1,000 annually. The only explanation for this difference that can be suggested, is that the number of medical men under forty years of age is proportionately greater than in other countries. The cause of death is put down as "infectious disease" in about 15 per cent., and as phthisis in about another 15 per cent. of the total.

THE day, if not already passed, is close to its setting, never more to rise again, when a doctor can be a rollicking, gin-drinking, beer-guzzling, swearing, roystering fellow, and be admitted to the bedside or to the close confidence of the sick. On the contrary, it will be required that he be a person of pure life, correct habits, courteous manners, intelligent, and of good culture, with uplifting rather than downward tendencies, and known to have clean social desires and thoroughly moral associations. He cannot be either a boor or a bore.—Dr. James C. Jackson.

BENZINE AND KEROSENE AS DISINFECTANTS FOR INSTRUMENTS.—Referring to Langdon's paper on the use of ordinary commercial benzine as an antiseptic agent, Lavrentieff states that for many years he has employed the fluid for disinfecting his surgical instruments, simply keeping them immersed in it. While securing an aseptic condition, benzine does not corrode instruments, and generally does not injure them in any way. The only drawback attending the use of benzine is said to consist in its extreme volatility. Lavrentieff recently tried to substitute for benzine another common product of petroleum—namely, kerosene. Up to the present he is satisfied with the results. The substance does not corrode instruments, while it is less volatile and much cheaper than benzine.

Brit. Med. Jour.

THE British Consul at Brest in his last report, says that ever since the old war, when the English prisoners died there in large numbers, Morlaix has been known as an unhealthy place. Recent information, however, discloses a most startling state of things, and even the local papers pronounce the town to be the "unhealthiest in Europe." From January 1 to November 29, 1890, there were 616 deaths and only 396 births, the excess of deaths over births being 220 in less than eleven months. The population is kept up merely by the fact that a certain number of country people settle in the town every year. Were it not for this immigration the population of Morlaix would be extinct in less than two centuries.

A SYSTEM of supplying cool air to houses in the same way as hot air is now supplied is about to be put to a practical test. The inventor of the system states that he proposes to place at the central stations ammonia and air compressors, brine and vacuum pumps, brine and air-cooling tanks and receiving and discharging connections. The conduits will be twenty-two inches in diameter, with four separate chambers; the upper and larger one will contain cold air; the two lower ones will be used for discharging and returning the anhydrous ammonia brine, and the one in the center will be a vacuum chamber. It is stated that the liquid used can also be used for freezing purposes and will enable the manufacture of ice to be carried on at half its present cost.

A BOARD OF SURGEONS for the examination of candidates for admission into the Marine Hospital service, will be convened at the United States Marine Hospital, St. Louis, Mo., October 12, 1891.

Candidates for examination should make application to the Surgeon-General, U. S. Marine Hospital service, Washington, D. C., as early as practicable, and should enclose testimonials from at least two reputable citizens, preferably physicians, as to their professional and moral character. No person will be considered eligible for examination whose age is less than twenty-one or more than thirty years, or who suffers from any physical defect which would be liable to impair his efficiency or incapacitate him from duty. The candidate must be a graduate of a medical college of good standing, as evidence of which his diploma should be submitted to the board.

THE USE OF VAGINAL INJECTIONS.—Dr. Doderlein, of Leipsic, stated that he has examined the secretions of a large number of healthy women, and although germs were found, they were never pathogenic. He never found the staphylococcus. From his observations, he draws the practical conclusion that disinfection of the healthy vagina is not necessary, whether internal examinations have been made during labor or not. There are, however, persons who syringe as a routine practice, and will probably continue to do so in spite of the plainest proof that it is unsound midwifery. In the pathological secretions of 156 cases, he found the streptococcus pyogenes 6 times. In such cases it is of great importance to bring about an acid reaction in the vagina, and the chief danger to the patient is in making internal examinations.—*Med. Record.*

FLOATING HOSPITALS FOR SURGICAL OPERATIONS.—In these days of antiseptic surgery, the aim of the surgeon is to destroy all germs, so that no suppuration can occur in his wound. If he succeeds, other things being equal, his operation is a success. Now, it has occurred to me whether it would not be better

to select a locality for operation where germs do not exist; where there would be no necessity for their destruction because of their non-existence. We have been informed that in mid-ocean disease germs are very few, if not altogether absent, in the atmosphere. Following up this thought, it has suggested itself that a vessel, anchored ten miles out at sea, might offer the most favorable locality for surgical operations. There would be many drawbacks to such an idea; hence, from this ideal proposition we would deduce the practical idea that sea-shore localities, because of their comparative exemption from disease germs, would offer a locality most favorable for the performance of surgical operations.—*Med. Record.*

THE "FATAL PATIENT."—We have received several letters regarding the story of the fatal patient published in the *Medical Record* of July 25. We have not space to publish all, nor is it necessary. The essential facts communicated are that while Dr. Wendell Phillips is alive, Dr. David Phillips, who treated the patient, was found dead in his bed the next morning. When the patient was turned over to him, Dr. Phillips remarked that he supposed he would be the next victim; and so he was. The coincidence was remarkable. We are indebted to one correspondent for some notes regarding the late Dr. Phillips. He graduated from the College of Physicians and Surgeons of New York in 1873, was Assistant-Surgeon to the Manhattan Eye and Ear Hospital, and also Nose and Throat Surgeon to the Yorkville Dispensary, at the time of his death. He served six years on the staff of the Northwestern Dispensary. He was a member of the New York County Medical Association and the Metropolitan Medical Society.

—*Med. Record.*

SIMPLE REMEDIES.—Try popcorn for nausea. Try cranberries for malaria. Try a sun-bath for rheumatism. Try ginger ale for stomach cramps. Try clam broth for a weak stomach. Try cranberry poultice for erysipelas. Try swallowing saliva when troubled with your stomach. Try a wet towel on the back of the neck when sleepless. Try a hot, dry flannel over the seat of neuralgic pain, and renew it frequently. Try snuffing powdered borax up the nostrils for catarrhal cold in the head. Try taking your cod-liver oil in tomato catsup if you want to make it palatable. Try breathing the fumes of turpentine or carbolic acid to relieve the whooping-cough. Try a cloth wrung out from cold water, put about the neck at night, for a sore throat. Try a saturated solution of bicarbonate of soda (baking soda) in diarrhoeal troubles; give freely. Try walking with your hands behind you if you find yourself bent forward.—*Health Monthly.*

A SPANISH FASTING WOMAN.—Dr. Vergara, of Villacienzo, in the province of Burgos, states that there is in that village a married woman, aged forty-eight, who for the last seventeen years has taken no nourishment of any kind; in fact, we are asked to believe that nothing whatever has passed her lips except a small amount of water, which she takes every three or four days. During all that time she has not left her bed for a single moment; she lies there in a state of lethargy, which might be mistaken for death but for occasional slight movements of her body, and a feeble moan which she utters when disturbed, as by light falling on her face. There seems to be no question of making the case a paying exhibition, as the husband resolutely shuts his door against mere sight-seers.

MESSRS. JOHNSON & JOHNSON have introduced a new fabric for dressings. It consists of felted absorbent cotton fibers in thin sheets. Its advantages are that there is no waste; it tears apart readily; is cleanly and compact; gives more surface than cotton or lint; and does not stick to the clothes. It can be readily shaped into any of the bandages, pads, tampons, or other forms in which cotton is employed by the surgeon, sanitary napkins, handkerchiefs for consumptives, or diapers, could be replaced by this tissue. It costs ninety cents a pound.

THE London *Lancet* has been laying great stress on the importance of sleep and to those who would live a long and useful life. Seven to nine hours, according to the temperament and constitution, is the modicum that ought to be taken, and the greatest regularity of the hours of slumber the better its effects are. The public is urged not to unduly prolong the day, for man, in common with most of the animal creation, has accepted the plain suggestion of nature that the approach of night should imply a cessation of effort. If he ignores this principle his work is done against inherited habit, and so far with additional fatigue. The practice of working by artificial light is strongly deprecated, and the *Lancet* shows that the old custom of early rest and early waking is certain to prove in future, as returns of longevity and common experience have shown, that it has proved in the past most conducive to healthy and active life.

THE following clipping from the *Hospital Gazette* shows the straits to which English doctors are reduced and the means taken to secure practice:

THE VICTORIA ROAD SURGERY

(Situate at the Corner where the Victoria Road, the Bellinden Road, and the Choumert Road join)
Is now open for the treatment of General and Special Diseases, by a Legally Qualified Doctor, who has practised in the Neighborhood for the past eight years.

TERMS TO THE WORKING CLASS.

Cash in Advance.

For a Visit Every Day of the Week at Patient's Home, and Medicine for the Week..... 5s.
A Visit every other Day and Week's Medicine. 3s.
A Visit and Medicine..... 1s. 6d.
A Week's Medicine at Surgery..... 1s.
One Bottle of Medicine at Surgery..... 6d.
Midwifery..... 12s. 6s.

Vaccination.

A Qualified Doctor always on the Premises Day and Night.

MALT AND COD LIVER OIL.—Dr. R. G. Eccles, Government chemist, has made an examination of the preparations of cod-liver oil and extract of malt in the market, and reports conclusions in accordance with those of Prof Chittenden. Dr. Eccles found that while the Trommer company claim that their preparation contains 40 per cent. of oil, the true proportion is nearly 25 per cent. less. The preparation of Parke, Davis & Co. was true to the claim of its makers as to the percentage of cod liver oil. In Dr. Eccles' report, he states that malt extract being more costly than the oil, the difference is not on the score of economy; the objection being simply on the ground that every preparation should be in strict accordance with the claims of the manufacturer. With this contention no one will care to disagree. The preparation itself is not a good one, for several reasons: Malt extract does not disguise cod-liver oil; the extract acts in an alkaline medium, and should be given before meals, while oil is best administered half an hour after meals, when the pancreas is most active; and it is very easy for the physician to order

the two ingredients mixed extemporaneously in proportions to suit, whenever he chooses to give such a compound.

LEPROSY IN JAMAICA.—Dr. Donovan, in his annual report to the Governor on the Lepers Home, Jamaica, estimates the leper population of the island at 450, or 1 leper to 1,380 of the population. Pending general legislation on the question of isolation, he recommends a prohibitive enactment against lepers keeping provision stores or being employed therein, or in the preparation of food; that no leper be allowed to engage in any of the following vocations, namely, baker, butcher, fisherman, tailor, school teacher, etc. In a synopsis on the treatment of Gurjun oil, internally, in a few selected cases, it is shown that the treatment had little or no effect in some cases, whilst in some there was a decided improvement. In one case of tuberculous leprosy in a boy, aged thirteen, it is stated that after about two months' use of the oil the general health was materially improved, the finger-nails had become sound, the tubercles on the forehead had all but disappeared, whilst the eyebrow hairs had grown to a marked degree.

ONE of the greatest obstacles to the exploration of certain tracts of country in Africa has been the tsetse fly, a small insect which, though harmless to man, large game and goats, is deadly to horses, oxen, dogs, and donkeys. Its bite proves fatal in a few days, the blood in the meantime rapidly losing consistency and color. Without cattle trade and agriculture are impossible in many districts, and some of the most promising territories have been left untouched by the pioneer trader in consequence of the terrible tsetse. It is, however, announced that a remedy for the bite of the deadly insect has been discovered, and so confident of the virtue of his specific is the discoverer that he has accepted a contract to transport Portuguese military stores on the back of bullocks through the districts infested by this pest. The importance of such a remedy can scarcely be overestimated, and if its efficacy is established the settlement of vast and fertile regions hitherto inaccessible will rapidly follow.

INSANITY AND TEA-DRINKING.—During the examination at the Waltham Abbey Petty Sessions of a woman who is charged with the wilful murder of her two children, a statement of some importance was made by the divisional surgeon of police, Dr. G. Fulcher, with reference to the habits of the prisoner. From some writing which was found on her, it was evident that the poor woman had meant to perish with her children, having been driven to this extremity by the belief that her children were hopelessly ill, and that she was being slighted by those from whom she had been accustomed to receive kindness. Dr. Fulcher found on examining her that, with the exception of a "weak heart," her physical condition was good, but she had been suffering for some time from headaches, palpitation, and sleeplessness. On being interrogated with regard to tea-drinking, she said she had been in the habit of taking a large quantity, that she had given it up, but had recently resumed the habit in consequence of her trouble. Dr. Fulcher was of opinion that the prisoner was the subject of melancholia, and he expressed the belief that the taking of tea in excess tended to undermine the constitution. The powerful effect of alcohol in excess as a nerve poison is a matter of daily experience. That many of the ailments from which women suffer, are at least aggravated if not excited

by excessive indulgence in tea—not as an infusion, as it ought to be, but as a decoction—is equally well known; and, although we are not prepared to admit that this habit would actually induce a condition of melancholia, there is little doubt that in a woman of a neurotic temperament, especially if her food were deficient in quantity and of poor quality, the use of this beverage in excess would be one of the factors in producing and perpetuating a condition of mental instability. It would be well if those to whom the frequent cup of tea from the pot—which has a permanent place at so many firesides, and has become almost a necessity, as they think—recognized fully the pernicious effects of this over-indulgence, effects which are only surpassed in importance by those of the occasional “drop of gin,” of which so much is heard in the out-patient departments of our hospitals.

—*Lancet*.

SALE OF TINNED GREEN PEAS.—Another prosecution for the sale of tinned green peas containing copper has taken place in Glasgow. The sample taken was found to contain about 0.0045 per cent. of copper, equivalent to 1.26 grs., or thereby of sulphate of copper per pound of peas. A penalty of £4 was imposed on the vendor. The evidence was of some general interest. Professor Charteris regarded copper as a poison. When taken in large doses the symptoms are vomiting and diarrhoea; in small doses, weakness and bad health. It might predispose to other ailments, and the risk involved in the public sale of it should not be allowed. Assuming half a pound of such peas as an ordinary quantity to be taken at a meal, this would mean taking also three-quarters of a grain of sulphate of copper, a quantity which might do harm to a weak person, though to a healthy person it would not do harm. Professor Simpson, Dr. J. B. Russell, and Professor Dalziel, of Anderson's College, gave corroborative evidence.

THE Mississippi Valley Medical Association will hold its Seventeenth Annual Session at the Pickwick Theatre, Jefferson and Washington avenues, St. Louis, October 14, 15, and 16. A full programme of interesting papers has been prepared and provision has been made for the fullest, freest, and most complete discussion of the same. Representative men from various sections of the country have been invited to open the discussions. The local profession of St. Louis is a unit to the end that every visiting physician shall be received and welcomed in a regular warm hearted St. Louis style. The same qualifications for membership are requisite in this association as for the American Medical Association, the former being subordinate to the latter. If eligible, you and your friends, together with your wives and families, are most cordially invited to visit St. Louis and enter into the scientific work and the social pleasures as you may desire. I. N. LOVE, M.D.,

Chairman Committee Arrangements.

DOES SMOKING INTERFERE WITH PHYSICAL DEVELOPMENT?—Anything which relates to the habit of smoking is naturally calculated to interest the large community of devotees to the Nicotian weed. We gather from an American contemporary the latest investigation which has been attempted in regard to the habit is that relating to its influence upon physical development. It seems that from some records made of the senior classes of Yale College during the past eight years, the non-smokers are proved to have decidedly gained over the smokers in height, weight, and lung capacity. Moreover, all the candi-

dates for the crews and other athletic sports were non-smokers. The non-smokers, also, we are told, were 20 per cent. better than the smokers, 25 per cent. heavier, and possessed 66 per cent. more lung capacity. Again, from inquiry with respect to another class of students the information is forthcoming that those not using tobacco in weight gained 24 per cent. over those using the “weed,” and in height 37 per cent.; in chest girth, 42 per cent.; while they had a greater lung capacity by 8.36 cubic inches. All those, doubtless, are disturbing facts for those who delight in smoking. But it should be recollected that the results were obtained from an examination of growing lads, whose immature manhood is always calculated to be deleteriously affected by habits which do not predispose to physical exertion.

—*Med. Press and Circ.*

KITCHEN MEDICINE.—Prof. Winternitz will have us learn more of the culinary art if we mean to pursue the healing art. The regulating of a diet, even in these days of exact science in chemical foodstuffs, is yet imperfectly understood in morbid conditions of the body, when the bio-chemical factor has to be calculated on. Individuality, usage, surroundings, etc., frequently defy the most scientific or rational treatment to be pursued with any hope of success, which force us to abandon any principle or canon of acknowledged dietetics. Moreover, the diversity of opinion held on the dietary of diabetes, obesity, or even anæmia, give ample proof of our meagre knowledge in morbid changes of the body. As a diarrhoea drug, his experience favors the popular preparations of the bilberry, sambucus niger, and the black elder. A decoction of vaccinium myrtillus is an invaluable adjunct in the water cure for intestinal catarrh. He gives a minute description of its preparation as a confection, and affirms that he has been able to still persistent diarrhoea with this when all others styptica and opiates in the Pharmacopœia have failed, even obstinate phthisical flux has yielded to this after defying all other treatment. He quotes a number of wonderful cures with the decoction, and particularly one of a few years' standing with the presumptive plaques muqueuses, leukoplacia buccalis, psoriasis linguæ, ichthyosis mucosæ, plaques des fumeurs combined. This case recovered after four weeks' treatment with the drug regularly applied as a gargle. In gonorrhœal discharges the vaccinium myrtillus is equally efficacious in checking secretions. The decoction was used as an injection, retained ten minutes in acute gonorrhœa, and after twelve days there was a perfect absence of gonococci. The chronic forms are equally successful.—*Med. Press.*

IT SAYS NOTHING ABOUT CUT RATES.—The following is an old French oath of a pharmacist, which was given in 1336. It is worthy of the careful study of our readers:

First. I swear and promise before God to live and die in the Christian religion.

Item. To honor, to esteem, and to serve as much as I can not only the doctors of medicine who instructed me in the knowledge of rules of pharmacy, but also my preceptors and masters with whom I learned my trade.

Item. Neither to put an affront upon one of my old doctors and magisters, or upon others.

Item. To add as much as I can to the glory, honor, and majesty of medicine.

Item. Not to give any emetic to an acute diseased person without before asking advice of a doctor of medicine.

Item. Not to touch the pudenda of a woman except in case of urgent necessity ; *id est* if there a remedy should have to be applied.

Item. Not to give poison to any one and never to advise anybody to do so, even not to my worst enemies.

Item. Never to give an abortive.

Item. To execute minutely the orders of physicians, without adding or omitting anything, as far as they are according to the rules of art.

Item. To contradict and to avoid like the pest the scandalous and the most destructive manner of practicing of charlatans, empirics, and alchymists, the high disgrace of the Magistrates who allow them.

At last. Not to keep poor and old drugs in my shop. The benediction of the Lord be with me as long as I follow these vows. So be it !

—Meyer's Druggist.

WINDOW-PANE BAROMETER.—A pretty use for cobalt and nickel salts, which, as is well-known, are affected by changes in the amount of moisture in the air, and which change they indicate by exhibiting different colors, is suggested by Rueckert, in the *Rep. Annal. Chim.* if window-panes, or wall-paper, or the like, are painted with the following solutions :

1. Chloride cobalt, 1 ; gelatine, 10 ; and water, 100.
2. Chloride copper, 1 ; gelatine, 10 ; and water, 100.
3. Chloride cobalt, 1 ; gelatine, 20 ; water, 200 ; nickel oxide, 0.75 ; chloride copper, 0.25.

They will be colorless in damp weather ; in clear weather, solution No. 1 will give blue color, No. 2 yellow, and No. 3 green.—*New York Medical Times.*

A DRUGGIST'S SLIGHT ERROR.—Customer : " You made a mistake in my prescription the other day. It called for 10 grains of opium, and I got a small package containing magnesia."

Druggist : " Are you sure about it ?"

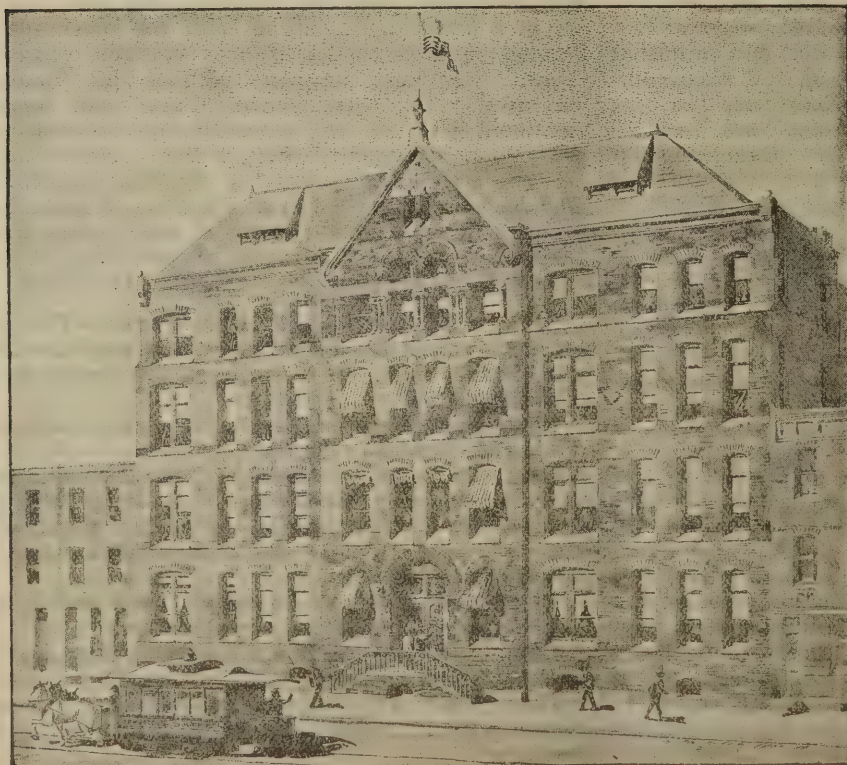
Customer : " Yes ; here is a duplicate prescription from the physician. Now the question is, Who got the opium ?"

Druggist : " Dear me ! that's so. (To the prescription clerk) James, who's dead in the neighborhood ?"

WEEKLY Report of Interments in Philadelphia, from August 8 to August 15, 1891 :

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess.....	2		Fever, typhoid.....	7	3
Abortion.....		1	Homicide.....	2	
Alcoholism.....	1		Inanition.....		14
Apoplexy.....	8		Infanticide.....		1
Asphyxia.....	1	1	Inflammation brain.....	5	19
Anæmia.....	1		" bronchi.....	1	5
Bright's disease.....	9		" kidneys.....	2	
Burns and scalds.....		1	" liver.....	1	
Cancer.....	8		" lungs.....	4	11
Casualties.....	15	4	" peritoneum.....	3	
Cerebro-spinal meningitis..	1		" pleura.....	1	
Congestion of the brain.....	4	11	" s. & bowels.....	8	7
" lungs.....	2	1	" tonsils.....	1	
" liver.....	1		Lightning stroke.....	1	
Child birth.....	1	1	Marasmus.....		42
Cholera infantum.....		87	Neuralgia of the heart.....	1	
Cholera morbus.....	7	3	Old age.....	21	
Cirrhosis of the liver.....	2		Paralysis.....	9	
Consumption of the lungs.....	39	4	Purpura hemorrhagica.....		1
" bowels.....	3		Pyæmia.....	1	
Convulsions.....		26	Rheumatism.....	2	
Croup.....		6	Shock.....	1	
Cyanosis.....		3	Sclerosis, spinal.....	1	
Debility.....	3	7	Scrofula.....		1
Diabetes.....	2		Septicæmia.....	2	
Diarrhœa.....	2	2	Sore mouth.....		1
Diphtheria.....	11		Suffocation.....		1
Disease of the heart.....	16	4	Suicide, hanging.....	1	
" hip.....	1		Sunstroke.....	10	
Drowned.....	3	1	Syphilis.....	1	1
Dropsy of the brain.....	1	1	Teething.....		2
" spleen.....	1		Tumor.....	1	
Dysentery.....	3	2	Ulceration of the stomach.....	2	
Epilepsy.....	2		Uræmia.....	7	
Emphysema.....	1		Whooping cough.....		4
Fatty degeneration of the heart.....	1		Wound, gunshot.....	1	1
Fever, malarial.....	1		Total.....	236	296
" scarlet.....	1	3			

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ARTHUR W. WATSON, M.D.

The Times and Register.

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Clinical Lecture.

ANGINA PECTORIS.

By PROF. NOTHNAGEL,

VIENNA.

(Translated by Herman D. Marcus, M.D.)

GENTLEMEN: I beg to introduce to your notice a patient who suffers from an insufficiency of the mitral valve and aorta, not on account of his valvular complaint, but because he presents a condition which is of the greatest importance in the study of heart diseases. The history of this patient shows that he had an attack of malarial fever in 1859, which attack returned in 1860 and 1866, and in each case continued for some weeks. During the winter of 1889 he had influenza, which was followed by palpitation apparently without cause and complicated with pains in the heart region, and such violent attacks of dyspnoea that the patient thought himself dying, and was forced to leave the bed quickly so as to be able to regain his breath. These attacks returned frequently, and noticing that they appeared more frequently after a late supper, he gave up his evening meals entirely.

During last May violent pains in the cardiac region and palpitation were experienced, recurring after two hours, followed after a lapse of a half hour by dyspnoea. After ten days this condition disappeared. At present, animal complains only of occasional dyspnoea which, however, disappears on deep inspiration.

We see also in this case, that the patient, while suffering from a valvular complaint, presents symptoms which, independent from this lesion, are of a positive character. This being not a typical case of angina pectoris, I must add a description of the symptoms of this disease. The history which the patient brings to us does not show us a true picture of such symptoms which are typical of the condition known as stenocardic attacks, stenocardic angina pectoris, angina Heberdeni (called after Heberden, who first described it). In all cases of heart diseases which I presented to you heretofore, we found no

subjective symptoms except dyspnoea, which was due to excessive activity on the part of the patient. Here we find a new element in the symptomatology of heart diseases,—the pain. I told you that pain may occur in a number of these diseases, a pain which commences as hyperalgesia in the heart region and extends over the thorax. In these cases the pains have a positive character, occur in attacks which are called, as I mentioned above, stenocardic attacks.

These attacks are described by patients as the most horrible conditions which man could positively have. The characteristic point is the sense of annihilation, the sense of perishing and dying, felt by such patients. Those who have not experienced the nature of such pains are entirely unable to understand the torment of this ailment. I felt once for a few moments such a condition, and I can understand what suffering a patient stands when attacked for minutes by this affection.

It is the most horrible state a man can experience. The fear of annihilation—being at the time in full possession of his mental faculties—must be the most uneasy sensation to be felt by man. This, combined with the pains in the cardiac region, makes the state to be endured more horrible and foreboding. The patients state that they are attacked by lancinating pains in the heart region, experiencing at the time a sense as if the heart would cease beating and life would ebb away. The pain does not confine itself to the cardiac region, but extends over the left half of the thorax to the left arm, and even to the fingers. Rarely the pain extends to the right side, still it may extend to the right arm. Besides the sense of pain, the patient may have paræsthesia of one or the other upper extremity, temporary deafness, a tickling sensation, formication and a passing weakness, and a paresis of the left upper extremity. The sense of dyspnoea also appears, but is not as intense as the horrible fear of losing the life and the pain associated with it. These symptoms will differ in their intensity and duration. Some patients will be attacked by this feeling only a few times during their life, while others will have repeated attacks. Some only have

a slight attack, while others experience it in its fullest intensity.

The objective conduct of these patients, though, is different, and does not agree with the subjective declarations.

Very often the patient will be a picture of intense fright and anxiety. If attacked on the street, and, as a rule, the symptoms do not manifest themselves slowly, but come on while the patient is in the best of health, the poor sufferer looks for support, leans against a wall or tree, and stands painfully quiet, most of them knowing instinctively that only the most perfect quietude will make the attack bearable. The face does not show their suffering, though at times it may exhibit a scared, timid look; the breathing is generally quiet, though the patient has a sense of dyspnoea; sometimes we find the respiration irregular, quick and then slow—once deep, then hardly noticeable. In patients who suffer from arterio-sclerosis, or chronic interstitial nephritis, the sudden attacks and high dyspnoea resemble very much bronchial asthma, and even the most expert diagnostician may sometimes confound them. In one patient we may find irregularity of the pulse, while the other's pulse may be quiet and even, and, though experiencing a most horrible attack, the respiration and pulse are normal. On another occasion the attacks differ, and we find the pulse irregular and presenting qualities which are symptomatic to certain anatomic heart diseases. Again, the heart-sounds may have a foetal character, the sounds become hollow, lose the characteristic rhythm peculiar to healthy adults, and become more intense, while the pulse becomes frequent and weak. The heart-beats become noticeable to the patient, and even the physician may feel a sort of vibration. In other cases the pulse becomes exceedingly slow. Traube, who suffered himself of these attacks, experienced this phenomenon himself. Once, while suffering horribly through one of these attacks, Traube observed that his pulse fell to 28 per minute, after which he became unconscious. You see, then, that in some cases the frequency of the pulse is reduced greatly, and some authors claim to have seen a still lower pulse ratio than Traube experienced on himself.

The loss of consciousness, as described by Traube, is not necessarily a symptom, and when present is due to the lowered activity of the heart, the over-coming pain and the sense of approaching death; all these symptoms, if appearing intense and sudden, may bring on a loss of consciousness.

Other complaints which may be present, such as nausea, vomiting, pain in distant nerve regions, such as the cervical and lumbar plexuses, painful attacks in the abdominal organs, make the attack still more characteristic.

No objective symptoms can be found except those due to the primary cause, or disease of these attacks, and which then will differ in patients.

Variations of this picture may be found, such as cases where the pain does not extend beyond the cardiac region, and only the sense of anguish and fear occurs, or even the pain in the heart region is not at all present, but the sense of oppression and fear is combined with a pale face and a small pulse. The diagnosis may become even more difficult, when, without any cardiac symptoms, the patient complains of temporary paræsthesia and difficult breathing. I already mentioned that the pain may be present in distant parts of the body.

The attack may last a few seconds, another time some minutes, or even hours, in which case we must

conclude that a number of attacks follow each other in short intervals.

We must now consider under which conditions this complaint occurs, and how can we explain it?

Angina pectoris occurs under different conditions and different ætiologic circumstances. Though changeable in its intensity and nature the main characteristics, such as the pain, the sense of oppression and annihilation, and the shooting pains to the arm are always present.

We must distinguish three groups of angina pectoris:

1. Pseudo-angina pectoris, known as such, not because the patient has no pains, but on account of the causation lying in other complaints than those of the heart itself.

2. Cases which occur in connection with atheroma or calcification of the coronary arteries. Germain-Sée, Ziegler, Leyden, and others, have accentuated the connection of changes in the coronary arteries and angina pectoris, while Cohnheim has proven the fact by experimenting on animals.

This is the most difficult and least curable condition.

- A third group occurs with valvular diseases, and

4. We have a pseudo angina which is present with diseases of other organs.

Heberden and others have proven that in some cases of angina pectoris no anatomical lesions of the heart have been found, and for a long time the opinion of Heberden, that angina pectoris is caused by spasms of the blood-vessels, beginning on the aorta and extending to the vessels of the upper and lower extremities prevailed. Now, after close study, it has been found that the causation lies in sclerosis of the aortic system, especially the coronary arteries. This sclerosis of the coronary arteries forms a most important point of angina pectoris. That the coronary arteries may be easily affected by arterio-sclerosis is easily explained.

But this condition of the coronary arteries is not always present in angina pectoris. I have found that idiopathic hypertrophy of the heart, fatty degeneration or concretio cordis are never or only rarely associated with angina pectoris, but we often find this condition in connection with valvular troubles, especially those of the aorta. This fact has been found by observers, such as Payer, Germain-Sée, and Romberg. In 1,500 cases of valvular lesions which I have examined I found that only once angina occurred with stenosis ostii venosi sinistri, but in this case only two attacks occurred during one year. Further, the diagnosis of this case has not been fully proven, and as no autopsy had been performed this case could not be accepted as an exception that angina pectoris is caused by any other valvular lesions than insufficiency or stenosis of the aorta, or both combined.

Another variety of cases in which angina pectoris is observed shows no lesions of the aortic valves, but diseases of the aortic walls, viz., aneurisms. Aneurisms are a frequent cause of angina pectoris, and it is well, on examining the patient, to look for an aneurism.

The fact, gentlemen, that angina pectoris occurs only with lesions of the aortic valves and not with those of the mitral valve, has brought me to an idea that these attacks may be explained in a particular manner. I will dwell upon this point later on. I have told you before that this complaint may occur in an anatomically normal heart. We may thus find typical symptoms of angina pectoris in nervous, neurasthenic persons, especially after they heard

others complain of this condition. Then we find these symptoms in cases of poisoning, especially tobacco poisoning. Then again we find them as reflexes in dyspepsia, called the dyspeptic asthma, which complaint disappears after regulating the diet or treating the dyspepsia.

The question now is, What are these complaints? where do they originate?

The picture of an angina case reminds one forcibly of a neuralgia. Romberg calls the stenocardic of Heberden a neuralgia of the cardiac plexus, and we must acknowledge that this is the opinion of the day, and that we do not know whether this is the only seat of this affection. The other symptoms lead us to believe that the tracheal and brachial plexusses are also affected; but we do not know whether these pains are transmitted over the central nervous system or over the peripheral centers. I beg to remind you of the shoulder pains in liver complaint. Here we conclude that the pains are conducted through the phrenic nerve to the brachial plexus; and in like manner we must explain the pains in the arm. Whether these pains come direct from the heart muscle or not is a question which we can neither prove nor disprove.

I told you before, that I think that partially, or at least in some cases, these pains are purely pains of the vessels. My opinion is that the arteries are sensitive of violent impressions in pathological conditions; pains may originate from the arteries, and then these anginal complaints, which we find connected with aneurisms, insufficiency or stenosis of the aortic valves, may be caused by diseases of the arterial walls.

Many authors thought to find the cause of these attacks in a sudden increasing weakness of an already weakened heart, causing an acute ventricular enlargement, due to an abnormal collection of blood. To prove this supposition, it has been shown that very often this attack occurs when the blood-pressure has been suddenly raised, such as after bodily exertions, undue excitement, or excessive eating. Against this theory, other authors claim that weakness of the heart is not essential to produce such an attack, and that weakness of the heart is not always present as a symptom. On this account, these authors have endeavored to show other reasons for the occurrence of these attacks, and Germain Sée and Huchard think it to be due to an acute insufficiency of blood in the heart muscle. If the heart is not excited, no symptoms are present, but as soon as the patient exerts himself in any way he experiences pains; a passing anæmia of the heart occurs, which is combined with excitement of the sensory nerves, and which may cause a weakness in the action of the heart-muscle.

The prognosis of these attacks differs. Light attacks may pass away without any special subjective symptoms; others may cause the patients terrible suffering, and often the first attack may terminate fatally. The moment the patient experiences the sudden pain and sense of constriction he may fall dead. With others, death occurs after suffering of some hours, combined with increasing weakness of the heart. When the frequency of the pulse falls to 28 beats per minute, or even less, and becomes so small as to be hardly felt; when the sense of annihilation becomes so great that the patient loses consciousness; when, again, a whole branch of one of the coronary arteries is stopped up by an embolus and no more blood is furnished to the ventricle, then you may understand that the attack may terminate in death. It is, therefore, very important to be care-

ful in your prognosis, when attacks follow one another in quick succession. The further prognosis depends on the causation of the complaint. The prognosis is unfavorable in fatty heart, or in very nervous patients. If the attacks are due to neurasthenia, tobacco poisoning, or stomachic trouble, then the prognosis is favorable.

The treatment of angina pectoris is manifold, and depends upon its primary cause. If due to excessive smoking, this must be *entirely* prohibited; if due to an affection of the stomach, by curing the stomach you will cure the angina. A neurasthenic patient should be sent to resorts such as Gastein, Tüeffen, Henhase's, etc.; or order him hydropathic treatment; or use electricity. Any of these methods will be successful.

But what will we do in cases which are caused by endarteritis of the aorta, valvular lesions of the aorta, aneurisms, or sclerosis of the coronary arteries?

In such cases we will use, firstly, treatment which we apply in sclerosis of the arterial system. I mention here regulation of diet, drinking of alkaline waters; and of medicines, the nitrites. Of these nitrites we may use nitrite of sodium, nitro-glycerine, and amyl nitrite. I will say that I know of no better remedy than nitrite of amyl to combat these stenocardic attacks. You can, and you must, use these remedies; and you will then be mostly successful in treating this affection. But I beg of you to use caution, and not to begin with these remedies in every case of arterial sclerosis or valvular lesion, because the nitrates may not act beneficially, and may prove dangerous. Nitro-glycerine may be employed with success in attacks where violent pains predominate and the disease is diffused over the artery; as to its use in thrombosis of the coronary artery, I have had no experience. But I recommend nitro glycerine preparations in attacks which originate in the small arteries—those painful sensations which characterize the typical stenocardic attacks. There may be cases which remain unaffected by this treatment; but the majority of them will quickly improve.

Nitrite of amyl should be used for each individual attack. When the prodromes of an attack begin, nitrite of amyl should be inhaled; and a few inhalations of this drug will prove very beneficial in combatting the attack. But we will find cases in which we must do more; in which we desire to cure the attacks in their entirety. For such a case you will prescribe nitro-glycerine in tablets of $\frac{1}{150}$ gr. or $\frac{3}{300}$ gr. I generally begin with $\frac{1}{150}$ gr. every morning for one week; the second week I give two $\frac{1}{150}$ -gr. tablets daily; the third week three tablets daily; the fifth week five tablets daily, which is my maximum dose; though I saw cases which stood larger doses without any inconvenience. I remember a patient who took the enormous dose of $\frac{1}{2}$ gr. daily without any ill effects. As soon as you notice intoxication caused by the drug, you will reduce the daily dose by $\frac{1}{150}$ gr. every week. You must impress the patient not to take more than $\frac{1}{150}$ gr. at a dose, and when prescribing three or more doses daily, state the exact time when to take the medicine, so as to prevent the stage of intoxication. Some patients cannot take this drug well, and in such cases we must dispense with its use. The symptoms which we find after using nitro-glycerine or nitrite of amyl are: A sense of heat in the head, congestions, giddiness, and intense headache. When these symptoms appear, the use of the drug must be stopped for eight days or more, and then again begin with a single dose daily

until reaching the dose which the patient was able to stand. With this dose you will treat for some weeks, and then gradually reduce the dose.

Should the nitro-glycerine not show its desired effect, then you will have to use morphine, which may also not be successful in every case.

In non-organic forms of angina it is difficult to say whether to use stimulants or narcotics. If the angina is complicated with fatty heart, use excitants, the most preferable being injections of camphor. Other remedies, such as digitalis, strophanthus, or caffeine, have no, or very little, influence on angina pectoris. You may also use ice on the cardiac region, or other like remedies; but no general rule can be set for such remedies, as some will prove beneficial in one patient while failing utterly to relieve another.

Original Articles.

SUMMER DIARRHŒA.¹

By WILLIAM G. STEWART, M.D.

GENTLEMEN:—We, as practitioners of medicine and surgery, are gradually drifting from the old empirical methods of the past into a rational field, at whose entrance stands the guide post—pathology. In place of prescribing blindly on the “hit or miss” plan, as was done fifty years ago, we can now treat almost every disease by rational and selective methods. This also suggests that the days of heavy dosage are almost past, and physicians have come to realize the necessity and importance of hygienic and dietetic treatment, with a minimum amount of medication. Another great point that forces itself upon us, is the influence of the physician's mind upon that of the patient. Although not a believer nor an advocate of the modern theory of “faith cure”—so called—I am more and more convinced that good results can only be obtained by impressing your patient with the fact that you thoroughly understand your business, and by obtaining his or her confidence. When confidence on the part of the patient is lacking, good results rarely follow our treatment.

Disease, which primarily means not at ease, is a departure from the normal physiological or anatomical standard of the part affected, and either is functional or organic.

The subject for our consideration at this time is improperly classed as a disease by most authorities, whereas it is simply a symptom of some other pathological process. With this brief introductory review, let us for a short time study the general symptom:

SUMMER DIARRHŒA.

Diarrhœa is defined by Gould as “An abnormal frequency of evacuation of the fæces, which are watery and sometimes acid.” The author's definition is: “Diarrhœa is not a disease, but merely a symptom of local or constitutional disturbance, manifested by frequent abnormal passages from the bowels.”

Under the head of summer diarrhœa are classed all those affections due to improper diet, drink, hygienic measures, and changes of temperature; and characterized by an abnormal number of loose stools preceded, followed, or accompanied by vary-

ing degrees of pain and uneasiness. Diarrhœa, coming from psychical causes, and such diseases as typhoid, typhus, and allied disorders, does not come under our consideration.

Cause.—Summer diarrhœa occurring in the adult or children over five years of age, is due to eating unripe or fermented fruit; spoiled fish or meat; drinking impure water or milk; exposure to heat of the sun and sudden changes of temperature. A very prolific cause is a combination of crabs or oysters eaten with tomatoes and some sweet, and is the most frequent factor met with in our popular summer resorts.

Summer diarrhœa occurring in babes under five years of age, is caused by feeding on contaminated or improper milk; exposure to heat and cold, combined with the irritation of teething, or the presence of parasites in the intestinal canal. Children who have been accustomed to wear a flannel belly-bandage are almost certain to have an attack of diarrhœa or cholera-infantum, if it is taken off for a few days or a week. The practice of giving babies unboiled water to drink, during the summer season, is another important cause.

Pathology.—The recent investigations and demonstrations of pathologists have shown and proved beyond a doubt that every fermentative and, probably, every disease process is dependent upon the presence of some microorganism known to us as a germ; and studied under the head of micro-biology. The question that naturally arises is, How can germs produce diarrhœa, and what relation do they sustain to articles of diet and drink?

Properly prepared articles of diet, when taken into the stomach of a healthy individual, are acted upon by the natural digestive fluids of the body; nutritive principles are absorbed and waste products, antiseptized by bile (the natural antiseptic of the intestinal canal) pass through the intestines as non-irritants and are evacuated. At another time, the same individual feels slightly indisposed; irritated by the heat; inactive. Improper food is taken into the stomach; functional activity is lessened, and the improperly digestive food passes into the intestines where there is a lack of normal bile. Under the favorable conditions of heat and moisture here, decomposition or fermentation rapidly ensue, with the production of carbon dioxide gas and irritating products. The irritating products (ptomaines of the germs), by their action on the mucous membrane of the bowel, cause a condition of hyperæmia and, by their constant irritation to the vaso-motor supply of nerves, cause an increased blood pressure in the peripheral capillaries, with an exudation of a semi-serous, salty liquid into the gut. This exudation, mixed with portions of the fermented food, passes through the whole canal, irritating the entire mucous membrane as it passes, until it reaches the rectum. This portion of the alimentary canal is supplied with a sensitive mucous membrane that is greatly irritated by the excoriating products; a great desire to go to stool exists, together with a relaxed tonicity of the sphincter ani. The frequent desire to get a stool is caused by portions of the irritating liquid in the rectum. But, all does not end here. The irritating products are also absorbed and taken into the general circulation, and produce sapræmic symptoms—fever, headache, and general malaise, in severe cases. Colic is caused by a hyperæsthesia of the peripheral sympathetic nerves supplying the intestines, caused by the irritating products and over-distension by the carbon-dioxide gas present. When the case per-

¹ Read before the Cumberland County (Penn'a.) Medical Society at its quarterly meeting held in Carlisle, July 14, 1891.

sists for any length of time, the condition of hyperæmia is changed to one of true inflammation and, later on, ulceration. Muscular cramps are caused by the rapid loss of the watery principles of the blood. Duodenitis, ileocolitis, and colitis, are only varieties of one and the same process and take their nomenclature from the parts affected and the variation of symptoms. This brief reference to the pathological process, then, establishes the point that summer diarrhoea is not a disease, but merely a symptom pointing to some irritating cause.

It would be useless for me to review the symptoms and prognosis of this condition, as they are all so familiar that they need no repetition.

Treatment.—In the treatment of this condition, as well as all others, we should first seek for the cause, and direct our measures against it, rather than lock up the bowels by the regulation prescription of bismuth and Dover's powder. Referring to the pathology, and taking it as our guide, the first indication in every recent case, as well as most of the advanced cases, is to eliminate the poisonous and irritating products lying in the intestinal canal. You should no sooner think of beginning your treatment by the administration of astringents than you would of closing a wound without removing all foreign bodies, or treating an inflamed eye without removing an irritating cinder. Elimination should always be the first step. Begin your treatment with a free calomel purge—a full dose of castor oil or syrupus rhei aromaticus, the latter being preferable in children. Although your patient has been more or less weakened by former discharges, it must be remembered that fermented and decomposed food may still remain, and will not be evacuated unless aided by cathartics. Frequently the case ends here, and requires no further medication. You must bear in mind that cathartics must be used with the utmost caution when the case passes from the simple stage of summer diarrhoea into an inflammatory stage.

If, after the action of the cathartic, the case should still continue, recourse must be had to intestinal antiseptics and astringents. The list of remedies recommended is legion, and each practitioner has his favorite drug or combination. Three indications must be met:

1. Neutralization or destruction of the poisonous products remaining; to be accomplished only by intestinal antiseptics (antiferments).
2. To diminish intestinal secretion by astringents.
3. To restore vaso motor tone and overcome the spasmodic element present.

There are two remedies that fulfill these indications to a limited extent, namely, sulpho carbolate of zinc and arsenite of copper.

Sulpho-carbolate of zinc, alone or in combination, is one of the most efficient and valuable remedies at our command. It is a non-irritating, crystalline, astringent salt, administered in doses of $\frac{1}{4}$ to 4 or 5 grains. "Sixty grains in one day caused no toxic symptoms." I have used, for nearly three years, the following combination, with the greatest success, in more than two hundred cases of adults and children:

R. 1.—Zinci sulpho-carbolatis gr. $\frac{3}{4}$.

Bismuthi subnitratiss,

Lacto-peptine. (N. Y. Pharm.

Ass.).....āā gr. j.

M.—Sig. One powder, capsule, or compressed tablet every one or two hours until diarrhoea is checked, then lengthen time as necessary.

¹ This combination is prepared by H. C. Blair's Sons, Philadelphia, in the form of a compressed tablet, as W. Blair Stewart's "No. 6."

I have yet to meet with a single case that would not respond to this treatment when associated with proper hygiene and diet. The sulpho-carbolate acts as a sedative to the stomach, an intestinal antiseptic, an antispasmodic, and an astringent. Lacto-peptine is a digestant, and will frequently check cases of summer diarrhoea when given alone. Bismuth is sedative to the mucous membrane, slightly antifermentative, and astringent. This combination makes a rational method of treatment, borne out by clinical observations.

One one-hundredth of a grain of cupri arsenitis, thoroughly triturated with sugar of milk, dissolved in half a glass of water that has been previously boiled, and given in teaspoonful doses every fifteen to thirty minutes, as indicated, relieves diarrhoea and colicky pains. Poor results will always follow the use of an improperly-prepared trituration, and the remedy must not be condemned nor discarded for this reason. Probably the preparation of Parke, Davis & Co. is among the best. Dr. John Aulde, of Philadelphia, has done much to bring this remedy into prominence by his valuable tabulation of results obtained by its use in treatment, and the articles written upon it by him.

Aside from these two remedies is a valuable combination of calomel and pulv. ipecac, āā gr. $\frac{1}{10}$, triturated with sugar of milk, and given every one or two hours. This combination is especially valuable in children, as it is so easily administered, and does not suddenly check the discharges from the bowels. It also causes a normal secretion from the liver. This may seem like the "similia ad similibus," but I do not use it, nor present it to you as such. We are privileged to use any remedy that may prove efficient, independent of all claims of "pathy."

Salol is the stand-by for many physicians, and, when given in 1 or 5-grain doses, alone or in combination, acts very nicely. Bichloride of mercury, administered by many as an intestinal antiseptic, is very unreliable, from the fact that it forms an albuminate of mercury with the albumins in the stomach, and is inert as far as antiseptic virtues go. Betanaphthol, naphtholine, carbolic acid, creasote; tannin and the tannates, hydrogen-peroxide, and many other remedies, answer nicely in certain groups of cases; but for a reliable stand-by the sulpho-carbolate of zinc is probably the best.

Thus far I have not mentioned opium and its preparations as used by many in every case, severe or mild. Are you justified in treating summer diarrhoea with opium or its preparations? and when is it indicated?

Opium, in small doses, is a stimulating narcotic; it increases arterial tension; diminishes secretion, except that of the skin and breast; retards or completely suspends gastric and intestinal digestion; lessens peristaltic action, and is antispasmodic. After effects of opium are depressing, causing nausea, vomiting (at times), headache, constipation. Are such effects desirable when other remedies will accomplish the same end without the disagreeable after-effects? Opium will, undoubtedly, check or retard many cases of diarrhoea, but the evil after-effects have caused me to strike it from my list in treating summer diarrhoea, except in cases to be mentioned later. Pulvis opii et ipecacuanhæ (Dover's powder), in doses of $\frac{1}{20}$ to 1 grain, given alone or in combination, is a common remedy. The virtue of this combination lies in the small dose of the pulvis ipecacuanhæ present, and it alone will give as good, if not more desirable, results than by its com-

bination with opium. In treating diarrhoea we want to avoid substituting one evil—constipation, nausea, headache, and indigestion—for another, hence, it is better to avoid opium, alone or in combination. Again: Opium so retards gastric and intestinal secretions to such an extent as to prevent digestion of any food taken, thus aiding in placing and keeping undigested irritating and fermenting food in the gastro-intestinal canal.

Severe pain and colic preceding, accompanying or following attacks of summer diarrhoea may be relieved quickly by the frequent administration of arsenite of copper, previously mentioned, the administration of aromatics, with hot applications over the painful point. As a last resort—or, in very severe cases, the only resort—administer a full dose of morphine sulph., with atropine sulph., hypodermically. This, I should say, is the condition where opium is really indicated, even though the after-effects may be undesirable. Morphine may be given by the stomach, if administered in hot solution, but the action is much more certain when given hypodermically, and the after-effects do not seem so bad.

The after-treatment of every case of summer diarrhoea is necessarily symptomatic.

Hygienic Treatment.—Upon this and dietetic treatment rests the success of our medication. It is our duty, as soon as called to see a case of this kind, to place our patient in a cool, sweet, well-ventilated room of the house, and compel him to remain there quietly during the hot period of the day. Never put him in a damp parlor or room that is kept constantly closed to the air and sun-light, and never opened except for an occasion of this kind, or for visitors. If not too sick, allow the patient to repose in some shady nook or corner of a cool porch or lawn. Absolutely forbid him attending to his duties in the hot sun, as this only acts as an aggravating cause. Excitement, business cares, and every responsibility, must be reduced to a minimum to obtain best results.

Children usually present the most refractory cases, and should never be allowed to go two hours without wearing the regulation flannel or woolen belly-band—the great protector against summer complaints—of course, not infallible, by any means. Keep the child clothed in a cool, light dress; never allow it to lie in the direct rays of a mid-day or afternoon sun during the hot months; see that the hot hours are spent in sleep or rest in a cool room, and much will have been done to abort attacks and lessen their severity should they come. Keep the bowels regular and the body scrupulously clean by frequent daily bathing. Avoid exposure to foul or contaminated air and every possible cause.

Dietetic Treatment.—"What shall I eat? and what shall I avoid?" are the great questions. The less food the patient takes during a short attack, the better will be the results. All green vegetables, sour or tainted milk, fruit or bulky foods, are to be avoided temporarily. The lightest, most easily digestible diet is to be instituted. Among some articles of diet are to be found: bread and milk, thoroughly scalded or boiled; chicken or meat broths; beef tea is not very nourishing, and contains too much waste or excrementitious matter from the meat; tapioca, sago, rice or arrow-root pudding, prepared with little sugar; pig's-foot jelly; wine jelly; a soft-boiled egg; roast potatoes; a little scraped beef, baked; Bovinine. As drinks, he must avoid ice-water and unboiled milk; lemonade, made without much sugar, and used moderately, is not objectionable. Milk must be previously

boiled, and given with a little lime-water added. Rice or barley-water is sometimes desirable.

Young children must be fed on breast milk, or thoroughly sterilized prepared milk or foods. Never allow a child to use water that has not been previously boiled. If there is cause to think that the food is at fault, it must be changed for some reliable prepared food, and given in small quantities, at regular intervals, rather than larger quantities at irregular periods. At times, it is necessary to give them nothing but rice or barley-water for one or two days, until the attack is broken.

Many other medicinal, hygienic and dietetic measures exist, but I will leave them to be brought out in the discussion, rather than prolong this article.

Before closing, I wish to firmly ingraft the points already made:

1. Summer diarrhoea is not a disease, but is a symptom.
2. Seek for the cause; remove it if possible, and let your motto be "elimination."
3. Do not treat on the mere plan of astringency, but follow the principles of intestinal antiseptics, with sulpho-carbolate of zinc heading the list.
4. Avoid opium, its preparations, derivatives and combinations, unless absolutely indicated.
5. Hygienic and dietetic measures must never be neglected, but should be the first points considered and mentioned.
6. Be master of the situation! Thoroughly inform your patient or nurse in charge of what must be done, and what must not be done, and, with these points in view, few cases of summer diarrhoea will fail to respond to treatment.

NEWVILLE, PA.

SOME FACTS EVERY PRACTITIONER OUGHT TO KNOW ABOUT SQUINT.¹

BY ALBERT RUFUS BAKER, M.D.,
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Professor of Ophthalmology and Otolaryngology, and Clinical Professor of Diseases of the Eye, Ear, and Throat in the Medical Department of Wooster University.

I MEET doctors all over the country who do not know the difference between a hypermetropic and a myopic astigmatism—practitioners who do not possess an ophthalmoscope or trial lenses, and who would not know what to do with them if they had them, who say, "I make no pretensions to treat eye diseases, except those of the most trivial character, such as granular lids and *simple operation to cure strabismus.*"

When I answer such remarks by saying that there are few subjects in the entire field of ophthalmology requiring so much judgment and such a wide knowledge of the anatomy and physiology of the eye, and so thorough a mastery of the intricate subjects of refraction and accommodation, as the treatment of squint, I generally lose in the esteem of doctors of this class the reputation I may have as an oculist. Two or three unsuccessful operations often serve to modify this unfavorable opinion very materially. As an illustration of the frequency of the failure of operations for squint, in the hands of surgeons not having a thorough knowledge of refraction and accommodation, and the optical principles involved in the treatment of these cases, I may quote the following statistics of consecutive cases, as revealed from my case-book in private practice:

¹ Read before the Ohio State Medical Society, June 18, 1891.

Advancement of the internal rectus has been performed thirty-two times, and thirteen of these were cases in which the surgeons had divided the internal recti too freely, and the case of simple convergent squint was changed into a marked divergent squint, leaving the patient in a much worse condition than if no operation had been performed. Several of these cases occurred at the hands of surgeons of undoubted skill. During the same period of time, eighty-four cases of convergent squint have been operated upon, and twenty-seven of these cases had been operated upon by other practitioners unsuccessfully. Some of them had been subjected to as many as eight to ten operations.

One of the facts every practitioner should know about squint is that no surgeon should perform an operation for cross-eyes who is not competent and prepared to make a careful scientific examination of the patient's refraction, and prescribe spectacles accordingly. There are thousands of cases of squint scattered all over the country who have been operated upon unsuccessfully, or who have knowledge of unsuccessful operations, and who go through life with this deformity uncorrected, because nearly every young graduate of medicine who has seen a few operations performed in the clinical amphitheatre, when a student, thinks himself competent to make the operation, and experiments on the first case he meets. It is not surprising that the operation has fallen into disrepute in the minds of laity.

Another fact every practitioner ought to know about squint is that the object to be gained by treatment is not only a cosmetic one, but to establish and preserve binocular vision.

The person suffering from squint sooner or later becomes to all intents and purposes blind in one eye. He has a blind side. He, to a large measure, has lost the "perspective sense," and cannot judge of distance.

Is the amblyopia of the squinting eye the cause or the effect of the squint? The weight of opinion seems to be that the theory of Donders is in the main true. The squint depends upon hypermetropia and the interdependence of accommodation and convergence; the amblyopia is the result of disuse, psychical exclusion, or suppression. The leader of the opposition is Schweiger, of Berlin. He thinks the amblyopia is monocular and congenital, or that it precedes and is one of the—if not the sole—causes of the squint. Cuignet sadly misunderstands or misrepresents Donders' theory, and brings forward the strange theory that the child conceals the squinting eye beneath the internal angle and under the shadows of the nose and brow because of photophobia. A "reflex" exercised by the defective eye is juggled with.

The strongest argument brought against the views of Donders is, that all children are hypermetropic, and consequently, the connection between hypermetropic and squint is not so evident as heretofore supposed. There are several answers to this observation. There is undoubtedly a difference in individuals! Some are able to exercise greater accommodation with less convergence than others. They have more "play" in this respect and are able to resist the tendency to squint. It has also been shown that the average amount of hypermetropia is much greater in squinting than in non-squinting children. Mr. Frost finds in his own practice that hypermetropia under 1 d., which is common in children, is seldom associated with squint. A majority of his strabismus cases had a refraction of over 2 or 3 d. of hypermetropia, and over 10 per cent. had h. of over 6 d.

Mr. Snell's cases of squint averaged over 4.25 d. of hypermetropia.

Landolt quotes the following conclusive experiment as proving that hypermetropia has a tendency to produce a squint: "If we possess binocular vision, let us fix a near object, cover one eye, the left for instance, and place a concave glass before the right. This eye will not change its direction, but will continue to see clearly, but the effort of accommodation which it is forced to make in order to neutralize the negative glass, imposes itself at the same time on the other eye, and provokes in the latter a converging strabismus of a degree corresponding to the power of the concave glass. The existence of this strabismus may be easily established objectively, and manifests itself subjectively by a homonymus diplopia at the moment when the diaphragm is removed from in front of the left."

It is certainly a matter of almost every day experience with practical ophthalmic surgeons, that the correction of the ametropia is frequently all that is necessary to cure the squint the moment the glasses are laid aside.

Another fact every practitioner ought to know about squint, is that most cases can be cured without an operation. One hundred and ninety-eight consecutive cases of convergent strabismus occurring in my private practice, one hundred and six, or more than one-half of the entire number, were cured without an operation. I say they were *cured* advisedly, because when I commenced using spectacles for the cure of strabismus, I found that when I charged fifty dollars for an operation for strabismus, patients paid it willingly, but when I charged fifty dollars for fitting spectacles, even though it required infinitely more skill and time than was required for the operation, strenuous objection was made to paying so large a fee, so as to keep my patients, and at the same time secure a moderate fee, I fell into the habit of charging a stipulated amount, and if the spectacles did not effect a cure, I agreed to make the operation without additional cost to the patient. In this way, with very few exceptions, I have been enabled to follow my cases to complete recovery. A review of these cases has suggested a number of interesting questions. We may have determined accurately the refractive condition of each eye, and yet be at a loss to know what lenses to prescribe. The glasses that are theoretically correct may be absolutely refused by the patient. The number of changes made in these prescriptions is a painful attestation of this fact. Must the whole amount of the error of refraction be neutralized? If there is a difference in the refractive condition of the two eyes, shall both eyes be corrected fully? If one only, what is to be done with the other? Must the spectacles be worn all the time? When, and how long should atropia be used? When will two pair of spectacles be needed? What are the indications for decentering the lenses, and what for prisms? The question of personal appearance also has to be taken in consideration, and will have a decided influence in rendering a verdict as to what style of frames shall be worn, eye-glasses or spectacles, which? These are problems that require the best judgment and try the skill of the oculist.

Every case presents a problem to be solved, as a general rule. The nearer a full correction of the error of refraction is attained the better. In order to do this accurately the accommodation should be paralyzed with atropia in every case. Spectacles should always be given in preference to eye-glasses.

Treatment based upon these facts, viz.: that the squint is due to the error of refraction, that binocular vision can be restored, and that squint can be cured without an operation has met with the most gratifying results. If cases are seen early and treated carefully it may be a question whether it is even necessary to make an operation.

Mothers are as a rule accurate observers of their children's ailment, and I am constrained to put more confidence than formerly in the statements frequently made by mothers, such as the following: "My child's eyes were not crossed until he had an attack of the measles or some other illness, or had a slight injury of one eye, and it was tied up for a few days; when the bandage was taken off the eyes were crossed, or he imitated a cross-eyed playmate, or he amused his little sister by making eyes." These children might have gone on through life without squinting, but for the trifling incident that for a short time unbalanced the natural tendency there is in all cases to establish and preserve binocular visions, but owing to the excessive nervous stimuli that is sent to the internal rectus in all cases of hypermetropia the squint soon becomes permanent. The practical application of this observation is that many cases of squint may be prevented by a little timely advice to the mother.

While every case of hypermetropia does not squint, every case of squint is hypermetropic. The statement that once hypermetropic—always hypermetropic is not true, as will be attested by any one who has kept cases under observation year after year. I have notes of a case, a boy six years of age, brought to me about seven years ago, with convergent strabismus; he had two dioptries of hypermetropia. I gave him a pair of spectacles correcting the error of refraction fully. The eyes soon became straight; about two years afterward he returned and said he could not see the letters on the blackboard at school with his spectacles. I found that he had only one d. of h., and changed his spectacles accordingly. In about another year he came back complaining about his spectacles, and said that he could see better without them. I found that his refraction was normal, and ordered him to stop using spectacles. About a year ago he returned, complaining that he could not see the blackboard, and I found that he was becoming myopic, and at the present time he has about 2 d. of myopia. Here we have a typical case of squint with 2 d. of hypermetropia changing to emetropia and then to 2 d. of myopia in seven years. It is quite possible, that even though this boy had not been fitted with spectacles as the eyes changed to normal, the squint would gradually become less and finally disappear altogether. I have seen a number of such cases, but they are exceptions. Even though the refraction change to normal or even to myopia, the squint almost always remains, because the one eye usually becomes blind before the refraction has changed to normal, and no effort is made to establish binocular vision.

This observation has a very decided bearing upon the treatment of these cases. If we can preserve the sight of the eye until such time as the eyeball changes its form and becomes emetropic, or until the child is old enough to wear spectacles (which serves the same purpose as nature often accomplishes in changing hypermetropic eyes into normal ones), we treat our cases in accordance with scientific principles and secure perfect results. Fortunately this can be done very easily, simply give the mother a solution of atropia, instruct her to watch the child; if it commences using one eye *all the time*, put a drop of

atropia in the fixing eye. This paralyzes the accommodation and compels the child to use the other eye. Repeat the atropia once or twice a week until the child begins to use the other eye. It may be necessary after a time to use the atropia in "the other" eye as it often becomes the fixing eye. As long as the child sometimes uses the right eye and sometimes the left, there need be no fear of the child becoming blind in one eye, and there is no necessity for using the atropia in this manner, although much benefit may be gained by using it in both eyes for a short time. Girls will usually wear spectacles satisfactorily at three and a half, and boys at four and a half years of age.

In treating cases of squint I have usually been governed by the following rules:

1. If the squint is alternating and the vision fairly equal in both eyes, it is seldom necessary to operate. A full correction of the ametropia will usually result in cure of the squint.

2. If the squint is fixed in one eye, but the vision of the squinting eye good, the same rule should be observed, excepting that atropia should be instilled into the working eye occasionally and possibly a patch kept over it, and orthopedic exercise indulged in as described by Landolt.

3. If the squint be fixed in one eye and the sight very defective, and no improvement after patient trial with lenses and covering good eye, only a cosmetic result can be attained. The operation should be performed any time after the sixth year.

4. If the squint be fixed in one eye and the vision of this eye is slightly defective, it is possibly undergoing deterioration from disuse, and should be carefully exercised, watched, and tested if the deterioration of vision appears to be increasing, an operation should be performed at once.

SOME OBSERVATIONS ON THE SEA VOYAGE IN THERAPEUTICS.

By P. S. DONNELLAN.

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THE recent contributions of climatologists to medical literature have advanced our knowledge regarding the beneficial effects of residence in high altitudes, in certain cases of pulmonary and cardiac affections; but, except for an occasional paper in the journals, the sea voyage in therapeutics has not received that attention which, in my judgment, it merits.

Up to within a few years ago a sea voyage was an undertaking almost to be dreaded, on account of the comparative insecurity of the vessels, the high rate of passage for very inferior accommodation, and the absence of the many essentials known as "modern conveniences." Now all this is changed, and a voyage in a first-class steamship or sailing vessel is attended with as much comfort and safety as can be obtained in a well ordered residence or hotel, and at a moderate cost. Indeed, so great has been the demand for superior accommodation by those in search of health, change, and rest, that special steamships and sailing vessels have been constructed in which every attention is paid to the requirements of the most exacting invalids.

The special features of the sea climate are ably discussed by Dr. J. A. Lindsay¹. He notes the al-

¹ *Amer. Journal Med. Sciences*, April, 1890, p. 350.

most perfect purity of the sea air, the absence from contamination by chemical vapor, factory smoke, sewer gas, malarial miasm, etc.; the free access of sunlight; the humidity, caused by the evaporation of the sea water; and the equable temperature, which in the tropics seldom varies more than 4° or 5° F. in the twenty four hours. These advantages contrast favorably with the atmospheric conditions on land, and are important factors in the hygienic treatment of those who suffer from pulmonary affections. The absence from worry or excitement; the freedom from business cares, from letters, telegrams, stock reports, the morning papers, and the exactions of society—all contribute to make a sea voyage an ideal change for the overworked business man or the neurasthenic woman.

In advising a patient to take a sea voyage it is important the case should be considered under the following heads, viz.:

1. The physical condition of the patient.
2. The direction and duration of the voyage.
3. Whether a steamship or sailing-vessel should be taken.

The physical condition of the patient, especially in pulmonary affections, demands the most careful attention. Cases in which there is evidence of active tubercular disease, with evening pyrexia, night sweats, hæmoptysis, or diarrhoea, do badly at sea. (Haber,¹ Lindsay,² Hilton Hagge,³ Doyle,⁴ Herman Weber,⁵ Sir Thomas Watson.⁶) All these symptoms are much aggravated by the tropics, and "scores of these cases die every year in Australia, far away from home and friends, regretting with their dying breath that they ever left their own firesides on the advice of their medical attendants" (Doyle⁷).

Regarding the direction of the voyage, as a general rule pulmonary cases are most benefited by a voyage to Australia, via the Cape of Good Hope (the passage through the Suez Canal and Red Sea being avoided on account of the intense heat) to the Sandwich Islands in the Pacific, to Japan, or India, now such fashionable health resorts in the cool seasons from October to April; to the Azores, Madeira, or St. Helena; or, where a combination of short trips alternating with residence or shore is indicated, a cruise around the Mediterranean is desirable. For American invalids the Northern Transatlantic route is not to be recommended, on account of the sudden and extreme changes of temperature and the large amount of fog and "heavy" weather to be met with off the Banks of Newfoundland. The Southern course, via the Azores to Gibraltar, is almost devoid of these objections. In cases of nervous disease, and for those patients who are making the voyage for change of scene and rest, a much wider range of latitude and longitude may be allowed, and infinite variety of tours chosen from, an enumeration of which would be outside the scope of this article.

The duration of the voyage must be measured by the amount of time and money at the disposal of the patient; though, in pulmonary cases, at least, six months at sea are to be recommended.

The question as to whether a steamship or a sailing-vessel should be chosen is an important one. On

a steamship the noises and odors from the engine-room; the pitching and rolling, so conducive to seasickness; the irritation caused by the smoke and the minute particles of coal from the furnaces, and the rapid transition from cold to the tropics, and *vice versa*, are some of the principal objections. While on board ship you have none of those drawbacks, the dreary weeks of calm in the tropics, the months of contemplation of an endless "waste of waters," and the helplessness of enforced idleness, are causes sufficient to depress the most sanguine temperament and to defeat the object in view, so that the question of steamship *versus* sailing vessel is a vexed one, and will have to be decided with due regard to the idiosyncrasies of the patient and the nature of his illness.

The sea voyage is especially indicated in patients suffering from incipient phthisis, in whom there are none of the grave symptoms previously noted. After a few weeks in the tropics the cough rapidly disappears, the appetite improves, and there is a marked increase in weight. All competent observers are agreed on beneficial effects of a long sea voyage in such cases. Patients who are imperfectly convalescent from pneumonia, pleurisy, typhoid fever, and surgical operations are much benefited, while the simple anæmia of puberty in girls soon disappears under the tonic and oxygenating effects of the sea air.

The treatment of amenorrhœa by an ocean voyage has received special attention from Dr. J. A. Irwin,¹ who states that a sea voyage is a most reliable emmenagogue in uncomplicated cases. My own experience is quite in accord with this observation, and I can recall a number of cases in which the flow returned at sea, not only in patients who had been amenorrhœic for several months, but in those whose age almost warranted the supposition that they had passed the climateric. Irwin² endeavors to explain this phenomenon.

1. By *physical* causes, due to the novelty of the situation.

2. *Ariel* causes, due to some special quality in the sea atmosphere.

3. *Material* causes, as a direct result of the unaccustomed motion of the vessel.

Patients suffering from hepatic or digestive disorders are seldom benefited by a sea voyage. Quite frequently their troubles are aggravated by the sameness of diet and the want of systematic exercise, which results in obstinate constipation.

Cases of rheumatic or gouty diathesis are, in my experience, unsuited for a sea voyage. Some of the worst cases of inflammatory rheumatism which have come under my care have occurred at sea, and it is well known that a large percentage of sea-faring men are incapacitated for active work at a comparatively early age by rheumatic arthritis.

A word may here be said as to the popular fallacy that it is impossible to take cold at sea. Nothing is more erroneous, as any physician of experience on ship-board can testify. The medical officer of a large passenger vessel is frequently called upon during the voyage to attend cases of pneumonia, pleurisy, bronchitis, tonsillitis, etc., contracted by those who imprudently imagined they could not take cold at sea.

No paper on the sea voyage would be complete did it not contain some reference to that *bête noir* of

¹ *The Practitioner*, London, 1876-7.

² *Loc Cit.*

³ *Practice of Medicine*, Vol. I., p. 996.

⁴ *Voyaging for Health*, *The Lancet*, 1890, Vol. II, p. 226.

⁵ *Quain's Dictionary of Medicine*.

⁶ *Practice of Physic*, London, 1843, p. 646.

⁷ *Loc Cit.*

¹ *Influence of Sea Voyaging on the Genito-urinary Functions*. New York, 1885.

² *Loc Cit.*

ocean travelers—seasickness. It is not my intention to advance any new theory as to the pathology of this distressing affection, or to suggest another to the long list of "certain" remedies for its relief. I will only remark that in my experience seasickness is more severe in females, in persons of bilious temperament, and in those who suffer from digestive disorders. It is almost unknown in infants and in young children. It is, as a rule, mild in advanced consumptives, and in pregnant women who have passed the fourth month.

1122 WALNUT STREET, PHILADELPHIA.

THE LIGHT THAT FAILED.

And what of poor Koch and his wonderful squirt,
That would lay old King Tubercle low?
Can it be that he only struck for pay dirt,
And that that caused his wonderful blow?
Oh, where are the patients his votaries cured,
With their caverns and rhonchi so grim;
Their bacilli-filled sputum; the sweats they endured;
Their poor bones sticking out through the skin?
The hospital wards are all empty, they say,
And nurses and doctors alone
Remain to thank God they're permitted to stay
To mourn the poor victims long gone
To the uttermost parts of the country of shades;
To the land of the sweet bye-and-bye;
Where they're waiting to broil in the hottest of Hades,
Bob Koch when he comes from far Germany.

N. B.—Accent on the y in last line. Yes, we know the meter is bad. 'Tis a halting rhyme. That's on account of the lymph in it. Do you Koch on? There is more of it, too, that's almost as good as this. There is really, don't you know. Of course it doesn't look reasonable, but we often sit up all night writing such good stuff as this. We are now writing a passion play and a novel. Don't blush. We have mixed carbolic acid with our ink, and burned some salt peter on a shovel in our room. You see we believe in literary antisepsis.

Why is it that the American people cannot be really great and achieve something remarkable in medicine and surgery? Of course, the discovery of anesthesia, ovariectomy, the development of abdominal surgery and of gynecology are all well enough in their way, but what bugs have you discovered save the cimex lectularii, pulex irritans, and blata orientalis? Where's your lymph? ha! ha! where's your lymph? And echo answers "where?"

RUDYARD KIPLING.
—*Western Med. Rep.*

ASSOCIATION OF IDEAS.—"I want something," said a farmer, as he entered a Michigan avenue drug store the other day.

"Well, what is it?"

"I didn't tie a string round my finger, but I guess I can get around it all the same. What's the name of the lake below us!"

"Lake Erie."

"Exactly. What's the name of the bay the boat runs to?"

"Put in Bay."

"Correct. Now, then, who put in there?"

"Perry."

"Straight as a string. I want ten cents' worth of perrygoric. My old woman said I'd be sure to forget it, but here's the proof that I didn't."—*World*.

THE MODERN DOCTOR'S EDUCATION.

When he was twenty-five years old our doctor graduated,
And men of commonplace ideas pronounced him educated;
But he took three years for travel, to learn the new pathology,
To study skin in old Vienna and Koch's bacteriology.

Then came a hard post-graduate course, which took him
three years longer;
Then, though his health was very poor, his intellect was
stronger.

His physical condition now approached emaciation;
His fraters ordered two years' rest for his recuperation.

Then polyclinics—it took three years their mysteries to unravel,
And then to study foreign modes three more long years for
travel.

When he returned his big mustache with long gray hairs was
threaded;
He'd lost his eyesight long before, and now was quite bald-headed.

When he was thirty-nine years old our intellectual giant
Hung out his little shingle, and then waited for a client.
The girl he loved in youthful days had long since wed another,
And had grown a portly matron and an excellent grandmother.

The boys he knew in grammar school seemed ancient as progenitors,
And one was governor of the State, and two of them were
senators;
But seated in his office, in retired sequestration,
He waited long for patients with their tales of inflammation.

One day, when he was forty-five, came in his earliest client—
John tried to be as quiet as the poetry of Bryant;
But the shock it came so sudden, with such overwhelming
power,

That he fell with apoplexy, and he died within an hour.
—*Western Med. Rep.*

NEW VIEWS ON LAUGHING-GAS.—The *Bedford College* (London) *Magazine* prints the following curious answers to a question in a chemistry examination: Among the subjects which seem to bring out strikingly original views we notice the preparation and properties of nitrous oxide, or laughing-gas.

One student gives as its mode of preparation: "Nitrous oxide or the laughing-gas is prepared by collecting it. This may be done by collecting it from a cave near Naples."

As regards its properties, divers views are held.

One says: "It is a colorless, tasteless, inodorous gas, having very peculiar properties, as when inhaled it causes insensibility, and is for this purpose greatly used for the painful distraction of teeth."

Another says: "Nitrous oxide is often called laughing-gas. With this gas they pull out teeth; this is the reason they call it laughing-gas."

Again another idea: "Nitrous oxide has a sweet taste, has a soothing influence, is an aesthete."

A distracted examinee said: "Nitrous oxide produces temporary insanity."

And one who had peculiar views about examiners, as well as the gas, said: "If you inhale nitrous oxide it produces a peculiar kind of insensibility in the form of laughing."

SEPTEMBER.

All golden in the autumn sun
The waving corn-fields shine;
Purple and full of ruddy juice
The grapes hang on the vine.

A blessing hovers in the air,
As Earth, from toil released,
Holds, with a hush upon her face,
Her sweet Communion feast.

—Bessie Chandler, in *September Lippincott's*.

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ANIMAL PRODUCTS AS REMEDIES.

IT is just possible that the next ten years may witness a curious revival of old, forgotten remedies under a new and highly scientific dress. We may laugh at the popular medication of the Chinese, and yet we have not to go so very far back into our dispensaries to find the things which seem so absurd in our modern eyes. Toads, newts, serpents, earthworms, "oculi cancrorum," the preputial smegma of sundry animals, and even human flesh, were employed by our ancestors as we now prescribe sulphonal and phenacetine. We have seen a poultice of hog's manure applied to post-puerperal hemorrhoids (and the patient declared that the benefit was very great), and perhaps some of my readers have heard of the rapid cure of "chapped hands" by liberal lotions of urine. Russia, to which we owe the discovery of the great diuretic powers of a live pediculus inserted in the urethra, has now given us a new remedy for tuberculosis, consisting of a wineglassful of urine, warm from the bladder, to be taken daily before breakfast.

These homely remedies, when viewed with a truly scientific spirit, lose their offensiveness, and may be considered solely with a reference to their value as therapeutic agents. In this light they are seen to occupy towards tuberculin and spermine a relation somewhat resembling that of the crude drugs as compared with the alkaloids. The urine is the grand route by which bacteria escape from the body. The protective principles may then as justly be looked for in this excretion as in the blood serum. Physiological chemistry is beginning to loom up as an important branch of medical study, and to throw a little light upon the vital processes. Civilization is a queer jumble anyhow; of half-knowledge, culture, custom, that seems to be truth and superstition so ingrained that it cannot be distinguished from knowledge. We disapprove of the Abyssinian for taking his beef raw, and calmly swallow our raw oysters; nanny-berry tea disgusts us, but we swallow musk and castor and the oil of rotten cod-livers with complacency. Per-

haps, instead of sneering at the Hindoo for bathing in cow's urine, we may yet evolve a good, scientific reason for the custom. Altogether, before exclaiming too loudly against the ridiculous nature of such asserted remedies, it is well to look back—and forward.

PERNICIOUS LITERATURE.

THERE appears in our newspapers the advertisement of a person who offers to send to the "afflicted" the "Mormon Elder's Book." Desiring to know what was the meaning of this suggestive little advertisement, we sent for a copy. It proves to be a little pamphlet advocating the use of a preparation of alleged aphrodisiac properties. A flimsy pretense is made of sending the book only to married men; but no questions are asked, and every applicant is supplied.

There may be circumstances under which the use of aphrodisiacs are allowable, as when, for instance, heirs are urgently desired; but such cases are rarely seen outside of novels, and for one such it is certain there are very many in which the use of aphrodisiacs can be only productive of harm. Impotence, apart from the results of disease like gonorrhoea, is always a warning. It is Nature's protest against the abuse of her gifts. It means that, in one way or another, the vitality has been sapped, and that it is time to call a halt. Old age has come, either by the lapse of years or as the result of excess, not specially sexual, but more often excess in mental labor, in care, or in eating. Sleepless nights, following the excitement of the stock board, and efforts at recuperation from heavy meals of nitrogen and alcohol, are the causes of impotence. Added to these, in an incredible number of cases, are the fascinations of illicit connections; and these elements combine to form the etiology of impotence.

Is it necessary to speak of the remedy? It is so plain that "he who runs may read." It does not require the learning of the physician to prescribe for such a case, but a very little bit of common sense will suffice. Every one can see the truth, except the victim, and *he* wilfully shuts his eyes against it, and seeks for anything that will enable him to continue his excesses, at any cost of future retribution. As we remarked in the beginning, there are very few cases in which an intelligent and conscientious physician can prescribe sexual stimulants, and applicants for such drugs give their advisers an excellent opportunity to enlighten the minds of the patients on these subjects; but as men do not want to believe they are living wrongly, or are no longer capable of the work they lay upon themselves, they will turn to those whose advice is more congenial. Here is where the "Mormon Elder" comes in; and his devilish little tract shows the victim how he can spur up his flagging energies. No word is uttered of the consequences, the ruin of health, the degenerating nervous tissue, the shortening of life. Even in a government as little paternal as ours, it seems reasonable to expect that some way should be found of suppressing people who advertise methods of corrupting the morals and destroying the health of the community.

Annotation.

PERIODICAL MELANCHOLIA.

THIS comparatively rare disorder I have met with a few times, and in all cases there was a decided predisposition. With Dr. Brauns I saw a lady who had inherited a defective nervous organization, which, at the age of thirty-eight, developed an agitated and hysterical melancholic attack recurring regularly every other day. During her so-called sane days, she laughed at the stories of what she had done, and was apparently cheerful, but her face would become soggy and icteroid, her heart beat very rapidly, and delusions of persionion of an unsystematized character with violent crying spells followed, lasting eight or ten hours.

The symptoms were those of a periodical toxæmia, probably of hepatic origin.

A male case has irregular recurrences whenever the least thing occurs to upset his health or occasion him mental distress, but he invariably reacted to symptomatic treatment, and sometimes a cardiac tonic was useful, and at others depressants were necessary.

An Iowa gentleman was stung by bees, after which he manifested attacks about every fourth day.

This disorder differs from ordinary melancholia in the more persistent and cunning attempts at suicide, a feature to which Spitzka calls attention.

S. V. CLEVINGER, M. D.

Letter to the Editor.

PHTHISICAL CONTAGION.

AT the Convention of the "Academia di Medicina di Torino, Prof. Foà informed of his interesting attempt to ascertain whether the phthisical contagion is liable to be stored up on the walls of the hospital. For this purpose he has scraped off a part of the wall on a level with the night table, in one of the departments of the hospital at Turin—Ospedale di S. Luigi—where six phthisical patients were lying. The obtained powder was hypodermically injected into three guinea-pigs, one of which remained alive, one died in twenty-four hours from pyæmia, the third was killed at the end of three weeks, and was found to be affected with tuberculosis (of the spleen and lymphatic glands).

Though it was only a single case, the author, however, thinks that there could not be any doubt about natural self-development of tuberculosis, as among the 425 guinea pigs experimented upon in his laboratory, not a single one was found to suffer from that disease; and, besides, the mother of the three pigs was found to be healthy, on the post-mortem examination.

S. SEILIKOVITCH.

PHILADELPHIA, PA.

Book Notices.

TRANSACTIONS OF THE THIRTY-FOURTH ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI, held at Excelsior Springs, Mo., May 19, 1891. Kansas City. Tiernan-Havens Printing Co., 1891.

PRACTICAL INTESTINAL SURGERY. By FRED. B. ROBINSON, B.S.M.L., Professor of Anatomy and Clinical Surgery, Toledo Medical College, Toledo, Ohio. Volume II, 1891. George I. Davis, Detroit. Cloth, 50 cents; paper, 25 cents.

Completes the first volume, giving a number of modes of intestinal operations.

THE POCKET ANATOMIST. Founded upon Gray. By C. HENRI LEONARD, A.M., M.D., Professor of the Medical and Surgical Diseases of Women and Gynæcology, in the Detroit College of Medicine. Fourteenth revised edition, containing Dissection Hints and Visceral Anatomy. Detroit, Mich., 1891. The Illustrated Medical Journal Co., Publishers. Cloth, 297 pages, 193 Illustrations. Price, postpaid, \$1.00.

This book is issued on thin, though nicely glazed paper, and takes up but little room, though 300 pages in thickness. The plates introduced are photo-engraved from the English edition of Gray, and are therefore exact; most of them are full-paged, and where they are not, they are grouped together so as to save much thumbing as possible.

The Medical Digest.

STRYCHNINE IN ALCOHOLISM.—In No. VI, page 108, we beg to correct:

R.—Strychninæ nitr. gr. $\frac{1}{10}$.
Aque dest. 3ijss.

FOR METRORRHAGIA.—

R.—Tinct. cinnamomi. f3ij
S. 3j to 3ij every four hours.

—Waugh.

FOR CARDIAC DROPSY.—Give sulphate of strychnine, gr. $\frac{1}{10}$, every four hours. When this ceases to be sufficient, instead of increasing the dose of strychnine, add sparteine, gr. $\frac{1}{3}$; then digitaline, aspidospermine, strophanthus, cactus grand., etc.

FOR SUMMER DIARRHŒA.—

R.—Zinci sulphocarbolat. gr. v.
Bismuth subnitr. gr. xv.
Pepsin saccharat. 3ss.

M.—Et. in chart No. xv div.
Sig. One powder every hour until stools become inodorous; then every two to four hours.

For children one year of age.—Waugh.

SUBINVOLUTION OF THE UTERUS.—Dr. B. C. Hirst suggests the following as the best combination to use:

R.—Strychninæ sulphatis. 1-20 grain.
Quininæ sulphatis. 2 grains.
Ext. ergotæ. 1 grain.

M.—Et. ft. pil. No. 1.
Sig. At one dose.

—Med. World.

GONORRHŒA IN ANY STAGE.—Try internally:—

R.—Potassii bromidi. 4 drs.
Sodii bicarbonatis. 1 oz.
Tinct. cannabis indicæ. 4 drs.
Spts. æth. nitrosi. 3 oz.
Aque. ad 6 oz.

M.—Ft. sol.
Sig. One drachm three times per day.

And as an injection:

R.—Extract pinus canadensis (white). . 2 oz.
Tinct. opii. 1½ oz.
Glycerini. 1½ oz.
Aque rose. ad 6 oz.

M.—Sig. Inject every three hours.

—Med. World.

BENZOLE IN WHOOPING-COUGH.—After some years' experience of the use of benzole in whooping cough I can safely say that it effects better results than all the other remedies recognized as useful in this affection. In the adult and child it is of equal benefit. In an infant just now under treatment, the attacks have been reduced from twenty or thirty in the night to two or three, and whereas when the treatment was begun evidences of bronchitis were present, now the chest is clear and the child able to be taken out of doors daily. All this improvement was brought about in less than ten days. I have administered benzole in whooping-cough, where convulsions and other complications were fast reducing all chances of recovery, with perfect success in a few days. In adults, where pertussis assumes often serious aspects, benzole has proved equally efficacious. Two minims in mucilage are sufficient for a child six months old, and five minims in mucilage on sugar or in capsule for adults. I am indebted to an article in the *Practitioner* of some years back for information regarding this treatment, and can heartily recommend a trial of it. Whenever the benzole odor is observed in the breath of the patient, then all anxiety as to the result may be allayed.—Robertson, *Lancet*.

THE PREVENTION OF PHTHISIS.—The high rate of mortality from phthisis induced the State Board of Health of New Hampshire to secure the opinion of the physicians of the State upon certain points in connection with the disease, such as its cause, frequency, preventability, treatment, etc. To this end blanks were sent to all physicians of the State, asking them to answer nineteen stated questions. The returns were exceedingly complete, and as reported in the recently issued annual report of the State Board of Health, make interesting reading. A summary is almost impossible, but the Board presents the following:

The chief causes and the preventive measures to be employed in the disease may be summarized, in the light of our present knowledge of the disease, as follows:

1. Pulmonary phthisis is the most fatal disease known to civilization.
2. The bacillus tuberculosis is generally believed to be the cause of the disease.
3. The disease, when developed after the first years of childhood, is acquired and not inherited, although there may be an inherited predisposition which renders the subject incapable of resisting the invasion of the bacilli.
4. The disease is liable to appear at any period of life.
5. That there is great danger arising from the use of tuberculous meat and milk. From the evidence which has been gathered we are led to believe the liability to infection from these sources is very great, and to insure public protection in this particular the State should exercise a careful supervision of our milk and meat supplies.
6. That the greatest danger of infection is from the sputa of the consumptive. For this reason, when confined to the house, a spit-cup or spittoon should be used, and when upon the street a handkerchief to receive the expectorations. The spit-cup or spittoon might preferably contain a disinfectant, but if these vessels are frequently and thoroughly cleansed with boiling water, disinfectants are not an absolute necessity. The handkerchiefs should be immersed in boiling water at least once daily before the sputum has become dried.

7. No person should occupy a sleeping-room with another who has tuberculosis, although many persons escape infection under such conditions.

8. The eating utensils of a consumptive should be washed in boiling water, and care should be exercised that the same glasses, spoons, etc., are not, before being washed, used by children and others. The patient should avoid kissing others, or placing in his mouth any article likely to be used or handled by others.

9. The dejections of consumptive patients in cases where the bowels are affected should be thoroughly disinfected.

10. Perfect cleanliness of the apartments occupied by consumptives should be urged in all cases. The bed-linen, towels, etc., should be very frequently put through the operations of the laundry, while the walls should be frequently cleansed and dressed anew. In fact, the whole question of restriction may be expressed in one word "cleanliness."—*Weekly Medical Review*.

BRITISH MEDICAL ASSOCIATION.—From the reports of *The Lancet*, we have selected the following items of professional interest, brought out at the last meeting:

A New Diagnostic.—Prof. Semmola (Naples) communicated a paper in French, translated by Dr. Pye-Smith, on a New Method of Arriving at a Diagnosis and Prognosis in Acute Disease by testing the urine for ptomaines, leukomaines, etc., which in their crystallized forms can be detected. He had been sent for to visit a young man suffering from left pneumonia following influenza. He manifested symptoms of what was believed to be cerebro-spinal meningitis. Prof. Semmola, having got some of his urine, injected certain rabbits and guinea-pigs which were always kept in waiting, and the result was that these creatures began to show symptoms of tetanus, but from which they recovered, and Prof. Semmola was able to assure the parents that the patient was only suffering from a form of blood-poisoning, which would pass off as the fever subsided. Other cases were given.

Dr. Drysdale observed that such observations could not be allowed in this country, by reason of the Vivisection Acts.

The Effects of Alcohol.—Dr. Samuel Wilks read a paper on this subject, in the course of which he reviewed its present position in reference to its medical aspect. The physiologists would say that it had an inhibitory action on the vagus. Dr. Brunton, on the other hand, tells us that sipping any fluid has a similar effect. When taken in large quantities alcohol is absorbed and acts as a stimulant, as is seen by the flushing of the face and the increased mental vigor. If these effects are seen on the surface, it should be remembered that similar ones must take place in the interior. It was presumed that alcohol increases the flow of the gastric juice. After its stimulating effects had passed off, it then produces a marked lowering effect on all the functions of the body, its more immediate effects being seen in the brain and the digestive system. Classical illustrations of its soothing effects were adduced. The great central fact relating to alcohol was its direct effect on the nervous system, in diminishing and lowering its functions. After a time it caused degeneration of the nerve centers, and produced general paralysis, manifested by the trembling lip and the shaky gait. The nerves became hardened and thickened. He had no acquaintance with any organic changes at-

tributable to alcohol in the lungs and kidneys, but it seemed that the digestive and nervous systems suffered. Physiologists had failed to demonstrate the chemical changes which it underwent in the body, and consequently it was impossible to say whether it was of the nature of food or not. No one had yet seen a person who lived on alcohol, although there was evidence of persons taking large quantities of alcohol who yet preserved their weight with a minimum of food, and that supported the theory that, although alcohol was not nutritive in itself, it prevented the wear and tear of the body. The opposite theory also existed that alcohol acted as a spur to the nervous system, and quickly wore it out. He could not disapprove of the use of wine and beer, if taken in moderation, by the masses of the people; and as to spirits, or spirits and water, he had not made up his mind that they were in any way useful, and he seldom recommended them.

In the discussion which followed, Dr. Skerritt, Dr. Norman Kerr, and many others took part.

Dr. Ridge exhibited photographs of geranium cuttings and poppy seeds which had been grown under the influence of alcohol in the one case, and of pure water on the other, in order to show that solutions of alcohol had the effect of hindering the growth of the plant.

Sir Risdon Bennett thought a distinction should be made between the use of alcoholic drinks in disease and their employment in health. With regard to those in good health there was a great deal of difference as to its effect on individuals in that class. Many found that they got through their work with comfort and less exhaustion by taking a small quantity of alcohol. He did not take whiskey, or brandy, or any spirit as apart from his ordinary diet. When traveling abroad he never dreamed of asking for a glass of port, but he takes the claret, which comes as a matter of course, or if champagne were available he did not hesitate to take a glass or two of that. Wine he felt made him sleep more heavily. He felt he could not lay down general rules for the ordinary practice of the community independent of individual experience and observation.

Prof. Semmola handed to the President his views on the subject, in which he pointed out that drunkenness among wine growers in Italy and foreign countries was extremely rare, owing probably to the fact that the wine they drink is of the purest kind, and that they did not drink more than was good for them.

Dr. Wilks, in his reply, observed with reference to Dr. Ridge's plants, that if he were a geranium he would prefer to be watered with pure water, as even turtle soup might not be so conducive to his healthy growth. Dr. Ridge had mentioned that Sir Risdon Bennett had been his teacher, and Dr. Wilks hoped that Dr. Ridge would live as long as his teacher, and enjoy at that advanced age as clear a brain.

Discussion on the Action of Chloroform.—Dr. Lauder Brunton, in opening the discussion on the action of chloroform, gave a short description of the results of the Hyderabad Chloroform Commission, the object of which, he said, was essentially a practical one. It was to save people's lives. In making their experiments the Commission had before them the question how far death during the administration of anæsthetics was likely to be due to the action of the anæsthetic itself, and how far to the effect of shock from the operation. The question regarding the action of the anæsthetic also divided itself into two—namely, how far the lethal effect might be due to affection of the

heart, how far to affection of the respiration, and how far to both. "Before we attempt further to describe the experiments made by the Commission, I think it might be well to clear the way by mentioning that the time was too short to allow of the general action of chloroform or ether upon the tissues generally being investigated, and that we had to confine our attention to the methods in which death was likely to occur during surgical operations as usually performed. Previous researches had pretty well established that chloroform is a universal protoplasmic poison, and will destroy the contractile power of individual cells, of cilia and of muscular fibers, and, when injected into the artery of a limb, will produce rigor mortis in it and make it stiff as a board. There was no question, therefore, of the power of chloroform to destroy any structure of the body if applied to it in sufficient concentration; nor do we attempt to deny that chloroform will destroy the contractility of the heart just as it would that of a voluntary muscle, provided always it reached the heart in sufficient concentration. But this was just the point at issue. If we drive chloroform into the trachea, or air very heavily loaded with chloroform vapor into the lungs by artificial respiration, it will be absorbed in sufficient quantities to paralyze the heart; but the question is an entirely different one if the chloroform be administered in the usual way, by inhalation. Our contention is that when chloroform is administered in this way it acts more readily upon the respiration than it does upon the heart, and, from the respiration failing first, a sufficient quantity to paralyze the heart is never conveyed to it, and that therefore death from chloroform inhalation is respiratory death, death beginning with the respiration and not with the heart. It will be convenient to take up first, more fully, the question of death from the anæsthetic, by which I mean death due to the action of the anæsthetic itself, and, later on, to discuss the question of death during anæsthesia—that is, death from the operation or other causes than the anæsthetic, sometimes in spite of its action, and at other times, perhaps, aided by its action. The experiments made by the first Chloroform Commission showed that in dogs subjected to its action the respiration invariably failed before the circulation. Those made by the second Commission confirmed this, but they brought out a new point—namely, the rapidity with which the heart fails from the combined action of asphyxia and chloroform. This action is of two kinds: First, asphyxia during chloroform inhalation stops the heart's action through the vagus nerve. This is the action which was looked upon by the Glasgow Committee as so dangerous, but which, as Dr. Bomford pointed out, is rather a safeguard, tending to prevent the too rapid conveyance of chloroform vapor from the lungs to the medulla. The second action of asphyxia and chloroform combined is a paralyzing one upon the heart itself. If an animal inhales pure chloroform vapor with free admixture of air, its heart will go on for a long time; in fact, we might say almost indefinitely. If an animal is asphyxiated, either by stoppage of the respiratory movements or by obstruction to the free entrance of air into the lungs, notwithstanding the continuance of respiration, the heart will go on for a certain time, but in the course of a few minutes will stop. This stoppage, however, occurs very much more quickly if chloroform be administered at the same time as an animal is asphyxiated, so that we may say that the great risk of death from the action of chloroform lies in the occurrence of asphyxia during its administration. I must here

draw attention to what I believe to be a grave fallacy in some experiments of my friend, Professor H. C. Wood, mentioned by him in his address on Anæsthetics at the Berlin Congress. A tracing which he there showed seemed to indicate most clearly that the action of the heart failed long before the respiration. I here reproduce, as nearly as I can remember it, the general effect of this tracing. In it we seem to see clearly a stoppage of the beats of the heart while the blood pressure sinks, and yet the respiration goes on freely. Now, I believe that the stoppage of the heart in this tracing is only apparent, and not real, and that it is, in fact, due to a small clot of blood in the cannula which connects the artery of the animal with the chymograph. I have had many such tracings, and my experience has led me, whenever I got them, to disconnect the cannula and remove the clot. Had there been no clot the stoppage of the heart would have caused the blood pressure to fall abruptly instead of gradually, as shown in the tracing exhibited by Prof. Wood. In comparing the action of ether and chloroform, we found that the great points of difference between them were:

"1. That ether was a less powerful anæsthetic than chloroform.

"2. That while neither of them paralyzes the heart when giving plenty of air, the heart would continue to beat much longer during asphyxia when combined with ether than when combined with chloroform.

"Chloroform is thus a more powerful agent, and, as I have already said on a previous occasion, it is like a sharp knife in the hands of the surgeon as compared with a blunt one. It is more efficient for good if properly handled; it is more powerful for evil if misused."

Dr. Shore (Cambridge) related in detail some of the experiments which had been undertaken in Cambridge University with a view of discovering the effects of chloroform. In one, the investigators, by entirely separating the nervous system of the animal from the vascular system by means of two rabbits, the one of which supplied the brain of the other with blood, showed that if the blood pressure were taken at the femoral artery when chloroform was given to the animal so supplied with blood, it was found that the operators could act at will either on the vascular system or on the brain. If the chloroform was administered to the dog acting as the feeder by means of the respiratory system, the blood pressure on the other dog was found to rise (in the illustrative case from 160 to 195). They learned from this experiment that chloroform could not cause a fall of pressure by acting on the vaso-motor centers, but it acts very readily in this manner by acting on the heart. He very nearly succeeded (when administering chloroform to the feeder) in stopping the respiration by sending chloroformed blood to its medulla. The feeder, however, was generally killed before enough chloroform had reached the brain of the fed animal. He did not think the animal died from failure of the respiration in all cases, but in some cases the animal succumbed to failure of the circulation. If chloroform is given with plenty of air, there is no reason why there should be a fall of blood pressure at all, which is caused by the direct action of chloroform on the heart, and not through depression of the vaso-motor centers.

Dr. Dudley Buxton gave a description of the effects of chloroform from a clinical point of view, dealt with its pathology, and noted the conditions on which he considered the use of the anæsthetic

was dangerous. He said that the apparently healthy died from the effects of chloroform, and that a carefully classified list of such cases would be a desideratum. As far as he had ascertained, certain young children did not so succumb. They, although subject to fright, were not the victims of psychical fear or of dread of death from the anæsthetic as occurs among adults. He had never come across the record of a death from ether or chloroform occurring in a healthy person. He touched upon the influence of climate, race, sex, and age on the administration of anæsthetics. The heart undoubtedly, in human beings, played a most important part in the question of the safety or danger of anæsthetics. Whatever might be said by others, there was incontestable clinical as well as experimental proof that primary heart failure is the commonest form of trouble in the case of chloroform poisoning. The research work of the Hyderabad Commission, as far as it went, was excellent, and it was only to be regretted that its so-called conclusions were permitted to be framed in such a way as to mislead those not sufficiently familiar with the matter to assume that it had settled once and for all the question whether chloroform causes primary heart failure. The Commission had, perhaps, failed to observe this effect, and that was all it was entitled to state. Clinical experience went to show that there is distinct evidence of cardiac failure occurring during chloroform administration.

Mr. Pridgin Teale (Leeds) said that in the address on Surgery two years ago, at Leeds, he had spoken strongly on this question. Since then, numerous deaths had been recorded in the journals. Out of *The Lancet* and *British Medical Journal*, he had found that the cases recorded during this interval amounted to—excluding those from America—three deaths from ether and thirty-three from chloroform. The deaths from ether were: A case of chronic suppuration of the thigh, another for amputation of the thigh, and a third for fractured pelvis with extravasation of urine, the patient in each case being in a bad condition to begin with. If we take the deaths from chloroform, it is found that out of thirty-three, seventeen deaths occur during comparatively minor operations; in all cases in people in comparatively good health. But deaths from ether did not occur in people in good health. He had heard of several deaths in England that did not come into this list. He called it a terrible death roll from chloroform, and a very serious matter for the consideration of the profession. Dr. Buxton had referred to those cases that came near dying. During the six or eight years before he took up ether, he had had six patients who, for some minutes, were thought to be dead. One was a case of squint, two for minor operations on the rectum. He did not get such narrow shaves now. Regarding ether giving, he thought that many of the deaths were due to defective administration. Deaths from asphyxia or from bronchitis ought never to occur. It was possible to give ether without distress, but only by persons properly instructed in its use. Not everybody even could be taught, as many had not the power of concentrating their attention for that length of time on what they were doing, and, therefore, never made good anæsthetists. Many were so deficient in sensitiveness that they did not know when the patient was failing. Having described the mode in which he administered ether, he said that he felt it ought to be the anæsthetic taken up by all hospitals and schools, and that all students ought to be taught its use before being allowed to qualify.

Dr. G. Eastes discussed the question from the clinical point of view, and focussed his remarks upon the question of the patient's safety. He thought that a large body of public opinion in England was now coming to the conclusion that ether is a safer anæsthetic than chloroform. Of the Hyderabad Commissioners, Dr. Lauder Brunton had based his opinions on experiments on animals; but Dr. Eastes thought the deductions from such experiments should not be absolutely transferred to the parallel case of human beings. As to Surgeon-Major Lawrie's views on patients chloroformed in India, the differences between such patients and the patients in this country might possibly account for the far better results in the former country. He had himself found that patients etherized in summer in this country have less interference with respiration than when the agent is used in winter. But, in spite of the Hyderabad instructions being followed by anæsthetists, the death-roll from chloroform still increases; now, as the death-rate from ether is much lower than that from chloroform, surely it is vastly better to use ether as a routine remedy than chloroform. The margin between life and death is smaller with chloroform than with ether, therefore ether allows greater latitude for accidents or some amount of error. He could not cast aside all the teachings of clinical experience upon man and follow implicitly the guidings of researches conducted upon lower animals, though Dr. Brunton himself were his guide. Surgeon Major Lawrie seemed to base his advocacy of chloroform chiefly on the fact that, although he had administered its vapor to human beings many thousands of times, he had never had a death. And certainly his statistics were far and away the most favorable with respect to chloroform or ether with which Dr. Eastes had acquaintance. But his practice had been in India.

Use of Dogs' Serum in the Treatment of Tuberculosis.—Dr. Baretta (Paris) read a paper on this subject. Some years ago Professor Richet found that rabbits were rendered immune to the staphylococcus pyogenes by injections with dog's serum, and later he found that the development of tubercle bacilli after inoculation was prevented by the same means. Applied to the human subject, the blood is drawn from the carotid of a perfectly healthy dog, and received with all care into small flasks, which are then hermetically sealed. Hypodermic injections are made with strict antiseptic precautions; they produce a slight rise of temperature, and sometimes a local swelling. No result was obtained in about one-third of the cases; in the rest a general improvement in digestion and strength took place, and in some there was noticed an improvement in the local signs; but in many the development of tubercle was only delayed for a time, and the conclusion was that the serum acted as a general tonic, and not as a specific. It had been also successfully used for other cachexiæ, as syphilis (by Fournier) and chronic malaria.

Dr. Lauder Brunton had seen Professor Richet's method in practice at Paris, and mentioned a case of chronic syphilis which had derived much benefit from it. He had also seen a case of tuberculosis markedly improved during the continuance of the treatment (fifteen minims every two or three days). Goat's blood was less suitable, since its corpuscles were of the same specific gravity as the serum, preventing the separation of the latter.

Chinese Drugs.—Mr. E. Hart made an interesting communication on some Chinese Drugs. He briefly described the institutions for medical relief in China,

and stated that in the medical art the Chinese were quite in the dark ages. Their medicines were very complicated decoctions of drugs, and as an example he gave the composition of a "recurring spring pill" for children. These pills, which were enclosed in sealed capsules, contained no less than fourteen ingredients, of which the active agent was "cinnabar," regarded as the chief of all metals, and believed to be capable of transmutation. The other constituents included such materials as "scorpion," "sea pearls," "amber," "grasshopper," "bezoar," or biliary concretion from the cow, and "musk." Mr. Hart showed specimens of these pills and other drugs, and concluded by testifying to the devoted efforts of Mr. Canlie to found a medical school at Hong Kong, efforts which were worthy of all encouragement. English medical men were, he said, the great agents of European civilization in China.

Surgeon-Major Jessop, who was in Canton after the rebellion, confirmed Mr. Hart's statements, and said that most Chinese would rather suffer death than undergo a surgical operation. Viper oil and cinnabar were popular remedies. Syphilis was very common. He strongly supported the movement to found a medical school at Hong Kong, and eulogized the work of the medical missionaries. Although the Chinese did not adopt new ideas so rapidly as the Japanese, yet when they did they pursued them actively.

Dr. Lauder Brunton pointed out that the cinnabar, which was the active ingredient in these alternative pills for children, might be compared to the "grey powder" of civilization. He thought, too, that "scorpion" might have some action, and mentioned that the skin of the toad had been found to act like digitalis.

Treatment of Pneumonia.—Dr. Coupland read a paper on the Treatment of Pneumonia, in which he deprecated the use of depressant remedies, the advocacy of which had been based on conclusions in disregard to the numerous fallacies which underlie all therapeutical experiments in acute diseases. He laid great stress on the treatment of pneumonia as a fever, and preferred the application of cold to antipyretic drugs. As to alcohol, he considered that, although it might be dispensed with in many cases, yet it was undoubtedly a most useful agent in affording temporary support, such as is sometimes needed to tide the patient over the crisis. He asked for experience as to the best means of dealing with the complication of delirium tremens, expressing his own preference for opiates when not contra-indicated by bronchitis or renal disease.

Dr. Sansom endorsed the views expressed by Dr. Coupland. He had been dissatisfied with drugs, except, perhaps, quinine, and had not found digitalis of any service. He agreed as to the value of the treatment by cold, and advocated its commencement as early as possible. Ice could be well applied by means of an ordinary sponge-bag. He cited the experience of Dr. Hare, at the Brisbane Hospital, as affording conclusive evidence of the value of the bath treatment in typhoid fever.

Dr. Hugh Woods considered that digitalis was of great value when administered from an early period of the affection.

Dr. Barrs pointed out the desirability of combating the distressing insomnia of pneumonia, for which he usually prescribed sulphonal. The best method of dealing with delirium tremens was a very difficult one; and he cited two cases, in one of which morphine injections were of great service, but in the other the

patient passed into fatal coma. He also considered that cold was far preferable to antipyretic drugs, and thought it could not be commenced too early. He had no very great belief in alcohol as a life-saving remedy, but did think digitalis of value.

Surgeon-Major Jessop had found the perchloride of iron with acetate of ammonia very useful.

Diphtheria.—Dr. Alfred Carpenter read a paper on Diphtheria, in which it was shown that fifty years ago the disease was unknown in this country, but for the last thirty-five years cases had been under his personal observation in country places. Between 1860 and 1870 cases were common in rural towns, and between 1870 and 1880 the towns became affected. The differences between the two cases were that in the rural districts the outbreaks were limited to one or two, whereas in the towns the number was more widespread. Some cases were caused by distribution of infected milk, some by contagion in schools, but many of the isolated cases had nothing to do with the infection of milk. In some cases it had been found that when cesspools were cleared away, and the basement of houses rendered dry and damp-proof, the disease had been found to disappear. He also showed that warmth and moisture and absence of light were necessary agents for the propagation of diphtheria.

Mr. Manley (West Bromwich), as a medical officer for an urban district containing 60,000 inhabitants, considered the question from the point of view of sewage improvements. He could not find out that the disease had any connection with sewage poison. It was formerly found in houses inhabited by people who were not overclean, and was not associated with the respectable classes of society.

Dr. Butterfield (West Kent) said that in rural districts diphtheria was not connected with sewers, but he had noticed the connection of the disease with large deposits of manure, especially in farm-yards.

Dr. Franklin Parsons showed that diphtheria had decreased in the rural districts and increased in towns, especially in large towns. He doubted whether they could attribute the existence of the disease to either the sewerage system or to the operation of the Education Act. In former years the mortality from the disease was very large in Paris, St. Petersburg, and New York. He also doubted whether the discharge of hot water in sewers could be attributed as the cause of the disease. It was his opinion that ultimately it would be found to be due to some organism, not necessarily parasitic, but residing in foul matter, which might be engrafted on the human body and assume the habits of the parasite.

Sir Wm. Moore had found that in the villages of India diphtheria was often present where there was neither drain nor sewer.

Dr. Thresh maintained that diphtheria was always associated with nuisance and filth, and he traced a curious coincidence between manure imported into districts and an outbreak of the disease.

Can a Crime or an Offence be Committed under the Influence of Hypnotic Suggestions? was the title of a paper read by Dr. Voison, of Paris. The paper contained several instances of attempts at murder, arson, and other crimes having been committed by persons under hypnotic influence. A dummy figure was placed in a bed, and the subject, having been hypnotized, was ordered to murder the figure, for which purpose a knife was placed in her hand. She was also enjoined on no account to reveal the name of the suggestor. The subject approached the bed, committed the supposed deed, and immediately afterwards denied any complicity, and refused to reveal

the name of the suggestor. Another instance was given of a woman, who had committed extensive thefts in Paris, having been for several months under the influence of hypnotic suggestion.

Prof. Benedikt had given the matter of hypnotism much attention. He did not believe that crime could be committed under the influence of hypnotic suggestion. He had witnessed what he might term the comedy between the doctor and the patient enacted at a sitting. He did not for a moment attempt to doubt the genuineness of M. Voison's experiments, but he doubted for various reasons, chiefly the general absence of the necessary mechanism and accessories for crime that these experiments had any scientific significance. He ventured to express the opinion that these experiments could not, as a general rule, be made upon English or German patients.

Mr. E. Hart regretted that Prof. Benedikt entertained such views on the subject. He had himself frequently produced mesmeric sleep.

Surgical Treatment of General Paralysis.—Dr. Clave Shaw opened the discussion. He described the operation as being done by two holes trephined one inch apart, or by an opening three inches long and one inch wide over the parietal region of the skull.

Mr. Cribb proposed the larger opening.

Dr. Batty Tuke proposed removal of the membrane.

Craniectomy.—Dr. Victor Horsley read a paper on Craniectomy, assuming that the brain in microcephalic idiots grew quicker than the skull. He was led to perform Landois' operation by removing a strip of bone about half an inch broad from nearly one whole side of the skull. He operated upon a child who showed all the symptoms of idiocy, being restless, uttering loud cries, and being non intelligent. The results of treatment were such as to remove all traces of the disease. Another child was born without fontanelles, who presented all the symptoms of an idiot. During the operation the child's temperature began to rise, and in a few hours was 104°. The respiration and pulse became weaker in a few days, and the temperature went up to 107°, and the patient died. This was not a case of shock, though the first risk in such cases is shock. He thought that in this case he had shown that the experiments of Eulenberg and Landois were verified, for he showed that there was in this case injury done to the heat centers in the motor cortex of the brain, and there could be seen in the brain, which he produced, injuries which would be seen as small punctiform hemorrhages. He thought that in such cases the operation should be divided into two parts:

1. The pressure ought to be relieved by a previous opening, because the brains of idiots were so close to the dura mater as to make operation almost impossible to perform without injuring the brain.

After the primary operation he thought, the secondary removal of a portion of the skull-cap could be easily performed.

On the Control of Railway Servants' Eyesight.—Mr. M. M. McHardy, F.R.C.S. Edinburgh, read a paper on this subject. He said that ophthalmic experts are necessary as examiners as regards color perception. The author would exclude all who manifested any degree, and Holmgren's test and method of using the same are recommended. And as regards acuity of vision, he recommended Snellen's standard test types. The state of refraction of the eye may be also of importance in deciding as to fitness of candidates, and the essential meaning of such terms as "long sight," "short sight," and "astigmatism"

must be explained to and grasped by railway authorities. A slightly short-sighted eye with sufficient unaided vision for railway purposes, may be a better and longer useful eye than a hypermetrope with the same amount of vision.

Dr. G. Mackay showed that in all the lines in Scotland the tests were inadequate, and the fewness of the refusals due to the supervision preventing incapable men from applying, and not to the tests themselves.

Antipyrin in the Incontinence of Urine in Children.—Many methods of treatment have been proposed and employed in incontinence of urine in children—belladonna and strychnine by Trousseau, electricity by Guyon, bromides, certain mechanical procedures, etc. All, or nearly all, of these have been attended with success at times, but none is infallible—where one fails another remedy may succeed. Antipyrin is now put forward by M. Gunde, who claims for it a place amongst the best of remedies in the therapeutics of this troublesome and common affection. Out of thirty-seven cases treated by this drug, nineteen were completely cured, fifteen much relieved, and in three only did the remedy completely fail. According to M. Gunde, these results are much superior to those of other therapeutic measures. He administers it in wafers containing from seven to fifteen grains, or in a mixture. This latter may have from twenty to sixty grains, according to the age of the child, to be taken in divided doses with two hours' interval. The time at which the medicine should be given is of importance. Thus he found that a child who took the last dose at 8 P. M. would not micturate before 5 A. M.; while if taken later, between 9 and 11 P. M., the incontinence was often entirely suppressed, even in the second half of the night. In cases where the antipyrin treatment was successful, the improvement was manifest early; but it is advisable that it be kept up for at least fifteen days in order to insure a cure. The sensibility of children to the action of antipyrin is variable. Some who are not affected by twenty or thirty grains are cured by sixty grains. Sometimes the incontinence will return, in which case the dose should be increased and the drug long continued. Antipyrin is well borne by children as a rule. In one of the cases cited there was some gastro intestinal disturbance of slight moment, and in another a cutaneous eruption which soon subsided.

GERMAN AND RUSSIAN NOTES.

HERMAN MARCUS, M.D.

SUBLIMATE LANOLINE SALVE IN ERYSIPELAS.—In the Goetting Clinic sublimate-lanoline salve is used with excellent results in the treatment of erysipelas. The affected parts are covered thickly with the salve, which contains 1 per mille sublimate, twice daily.—*Deutsche Mediz. Zeitung.*

GONORRHOEA.—Dr. Hanika (Munich) recommends that gonorrhoea be treated by filling the urethra with a powder, composed of equal parts of tannin, iodoform, and thallin sulphate. He claims to have been successful of curing the disease in a very short time whenever employing this treatment. The powder is introduced through a metal tube, fitted with an obturator, after the patient had emptied the bladder. The applications should be made night and morning.

—*Der. Aerztliche Practiker.*

EUROPHEN, A NEW IODINE PRODUCT.—Dr. W. Siebel reports a new iodine product, europphen, which physiologically resembles very much iodoform. It is

a yellow powder, insoluble in water, but freely soluble in alcohol, ether, chloroform, and oil. Fifteen grains may be given at one dose without any ill-results. Bacteriological examinations in pneumonic, typhoid, pyocyanic and prodiogiosic bacilli, in staphylococcus pyogenes aureus, micrococcus tetragenus, cholera, and Finkler-Prior's spirillæ, showed that europphen does not destroy the bacteria, but stops them in their growth. In its chemical composition europphen is isobutylorthocresoljodid. Being odorless and non-poisonous, Siebel thinks it greatly preferable to iodoform, as it possesses all its chemical and physiological qualities.—*Therap. Monatsheft.*

EICHHOFF reports success with the use of europphen in all venereal diseases except gonorrhoea. Constitutional syphilis, whether primary, secondary, or tertiary, is benefited by the local external and subcutaneous treatment.

Externally it is used in 1 per cent. and 2 per cent. salves:

R.—Europphen.....	gr. xxx.
Ol. olivarium.....	3ij.—gr. xxxiv.
Lanolin.....	3v.—3ij.

M.—Ft. ung.

A solution of europphen in olive oil is used as an injection, beginning with $\frac{3}{4}$ grain, and gradually rising to 1½ grains.

Non-venereal skin diseases such as eczema parietarium, psoriasis and favus were not affected by europphen, while in the treatment of ulcus cruris, scrophuloderma, lupus exulcerans, and burns is proved very beneficial. This may be explained by the fact that europphen does not affect dry skin affections.—*Therap. Monatsheft.*

OXALIC ACID IN AMENORRHOEA AND ACUTE CYSTITIS.—Marsh recommends oxalic acid in amenorrhoea and acute cystitis in the following form:

R.—Acidi oxalici.....	gr. xv.
Syr. corticis aurantii.....	3viiss.
Aquæ dest.....	3ijj.—3vi.

M.—S. One teaspoonful every four hours.

—*Therap. Gazette.*

THERAPIE OF HUCKLEBERRY.—Prof. Winternitz recommends a decoction of huckleberries (saccinum myrtillus) in the different forms of diarrhoea. He covers the dried berries with cold water and cooks them for two hours, stirring them up quite frequently. After the mass is syrupy-like, he separates it from the remaining berries and presses the juice from them out. He then cools the juice, after which it is ready for use. One to two teacupsful of this juice per diem is the dose.

Winternitz claims that this preparation will act beneficially in the most pernicious cases of diarrhoea.

He uses this decoction in gonorrhoea as an injection, and claims to be very successful with such treatment.—(*Blätter fuer Klin. Hydrotherapie.*)

HYDROTHERAPIE IN CROUPOUS PNEUMONIA OF CHILDREN.—Dr. Julius Fodor recommends hydrotherapeutic treatment in croupous pneumonia in children.

He cites following case as an example:

An eight months' old child had suddenly cramps, which disappeared in a short time. Two days later the child had cough, with difficult breathing, vomiting and insomnia. The diagnosis was croupous pneumonia of the right lung. Fodor ordered, mornings and evenings, a bath of 28° R. for five minutes, followed by drying and covering up the child for half an hour; he then ordered cold, damp compresses over the

trunk, changing them hourly, or if temperature would be high half hourly.

Soon after beginning this treatment the child stopped to vomit, the sleep returned, pulse improved, and expectoration took place without using expectorants. The fever was controlled by applying compresses and frequent baths. On seventh day, crisis, with fall of temperature and diaphoresis.

The child was then bathed only once daily. The compresses were renewed only every two or three hours; the infiltration disappeared in a few days, and the catarrh was soon entirely relieved.

—*Blätter fuer Klin. Hydrotherapie.*

A NEW SOLUTION OF CAMPHOR.—Dr. Carl Rossner (Stuttgart), recommends a solution of camphor in liquid paraffin as preferable to any other camphor solution. It may be easily solved with a little heat, and is a thin fluid, unchangeable and clear. Rossner kept a solution for five years, and found it after that time perfectly clear and useful. The proportions are: Camphor, gr. xxx; liquid paraffin, ℥ii., of which solution 7-15 grs. may be injected with perfect safety.

—(*Wuertemberg Med. Corresp.-Blatt.*)

ICHTHYOL.—*The Korrespondenz Blatt f. Schweizer Aerzte* recommends ichthyol in 20 per cent. vaseline salve as a reabsorbent in pleuritic exudates.

DERMATOL.—Dr. Sackur (Breslau) has used dermatol extensively, and came to the following conclusions:

1. Dermatol is an odorless, not dangerous, an excellent therapeutic agent in the treatment of all fresh aseptic, granulating wounds of the soft parts.

2. Dermatol is of no use in the treatment of sluggish wounds and abscesses, but if the suppuration has been combated sufficient long by antiseptic treatment to render the wounds aseptic, dermatol will hasten the cure.

3. I consider dermatol the best remedy for the treatment of sores of the lower part of the thigh.

4. It is of no value whatsoever in the treatment of all torpid, badly granulating wounds and sores.

5. Dermatol has most likely none of the anti-tuberculous action of the iodoform.

Certainly it would be well to make other experiments with dermatol, considering that it might decrease the use of a remedy as much disliked as iodoform is.—*Berl. Klin. Wochenschrift.*

FRENCH NOTES.

A. E. ROUSSEL, M. D.

THE TREATMENT OF DIPHTHERIA (Prof. Loeffler).—The sublimate possesses a very decided action on this specific bacillus. Solutions of 1-10,000 rapidly destroy the germs deposited in the culture liquid; but in order to destroy the bacilli situated in the deeper tissues, it is necessary to use a solution of 1-1,000 for a period of twenty seconds.

The cyanide of mercury possesses the same bactericide action, but to a somewhat lesser extent.

The silver preparations give excellent results; while, on the other hand, chlorate of potash is absolutely inactive at 5-100.

Bromine does not seem to sustain its reputation, as a solution of 1-300 is necessary to destroy the culture germs, and one of 2.5 per cent. to destroy the bacilli.

Chloride of lime and chlorinated water exhibit an energetic action.

Absolute alcohol and ether immediately destroy the germs. The same result may be obtained with a solution of carbolic acid at 3 or 4 per 100.

The essences, in form of vapor, destroy these germs; but if brought in contact with the bacilli for a period of twenty seconds their development is not arrested.

The author arrives at the following practical conclusions: As a prophylactic measure in case of an epidemic, healthy persons may gargarize every three or four hours, for five or six seconds, with a solution of sublimate at 1-10,000 or 1-15,000, or, better still, with a solution of $\frac{1}{8}$ to 10,000 of cyanide of mercury, which possesses a less disagreeable flavor. We may also use chlorine water (1-100) and thymol (1-500 and 20 per cent. alcohol). These gargarisms should be used every three or four hours.

Among the volatile substances, we may employ the essences of lemon, of eucalyptus dissolved in ether, and introduced into the nostrils by small pieces of absorbent cotton.

Patients should gargarize every one or two hours with feeble solutions, and every three or four times with a solution of sublimate, 1-1,000, or carbolic acid at 3 per cent. in 30 per cent. of alcohol, with a mixture of alcohol and turpentine, aa, with 2 per cent. of carbolic acid. In the intervals, applications may be made to the throat with a solution of carbolic acid at 5 per cent., chlorine at 1-100, bromine at 2 per cent.

At Missler's Clinic, excellent results have been obtained with the sublimate and carbolic acid. Patients quickly become accustomed to the disagreeable taste of the latter. After several days of this treatment bacilli are no longer found in the false membranes.

The diphtheria of scarlatina is very favorably influenced by the divers antiseptics. These patients support very well carbolic acid and seem to possess an immunity against symptoms of intoxication which are sometimes observed in other cases.

—*La France Médicale.*

ETHER AS A VEHICLE FOR MEDICAMENTS FOR EXTERNAL USE.—The inefficacy of medicaments employed in frictions depends in part upon their insolubility in the secretions of the sebaceous glands. Sawyer advises in these cases the use of substances dissolved in ether instead of oil or lard. Iodine, menthol, camphor, capsicum and belladonna have given him better results employed in this manner. The etherized solution of menthol has been very efficacious against pains accessible to external treatment.

NEW APPLICATION OF SALOL.—Dr. Ceppi calls attention to a new use of salol. It consists of utilizing it not as a remedy but as a *poste remède*. As salol is not dissolved in the stomach and is only acted upon by the pancreatic sugar, the author suggests its employment to envelop and protect medicaments which are only to act upon the intestine. The Ruatinized pills of Unna, already accomplished this end, but it would be useful to be able to prepare medicaments extemporaneously. Salol may be of use in these cases. Nitrate of silver, the vermifuges and the anthelmintics may be advantageously administered in this manner. Dr. Ceppi submits this question to the druggists, and asks them to find a *modus faciendi* which will resolve this problem.

GLYCEROLE OF TANNIN FOR THE ERUPTION PRODUCED BY IODOFORM.—In several cases of iodoformic eczema rebellious to all treatment, B. Micherkiewicz has found very useful the application of glycerole of tannin 1 to 3 parts of glycerine chemically pure.

THE BEST OF ANTISEPTICS FOR THE MOUTH—
(Dujardin-Beaumetz):

R.—Water..... 1 pint.
Boric acid..... ½ ounce.
Carbolic acid..... 15 grains.
Thymol..... 4 grains.

—*La Médecine Moderne.*

Medical News and Miscellany.

DR. J. GIBBONS HUNT has adopted the Jaeger system of clothing in its entirety.

THE kind-hearted policeman who returns the lost child is the best heir restorer ever known.

THE oldest medical work—an Egyptian papyrus dating from 1,500 years or more before Christ, and containing prescriptions then old—has been translated by George Ebers, the German novelist.

JAW BREAKERS.—Nitrocenzolynitrodiphenylamin—a yellow coloring substance. Methylbenzometholaethyletetrahydropyridincarbonate—artificial cocaine. Isobutylorthocresoljodid—europen (an iodo-form product).

It is pretty generally understood that the Chair of Practice at Jefferson Medical College will not be permanently filled until next spring. Dr. J. C. Wilson will probably give the lectures on this branch during the coming term.

PROFESSOR JAMES E. GARRETSON has given up his city residence, and makes his home in Lansdowne, where he has built himself an elegant residence. Now that "John Darby" has joined J. Gibbons Hunt and John J. Reese at Lansdowne, this rapidly-growing suburb bids fair to rival Haverford as a center of culture.

VACCINATION IN AUSTRIA-HUNGARY.—The Secretary of State, of Austria-Hungary, has ordered all the county and city departments in the State to enforce the rules of public vaccination. By this order no child will be permitted to attend school, without being vaccinated. Where vaccination had been done during the last ten years they were exempt from re-vaccination, otherwise they must undergo it a second time.

THE Medico-Chirurgical College Faculty has received no accessions of new blood; the vacancies have been caused by the withdrawal of Profs. Goodman, Waugh, Stewart, and Stubbs. Profs. Garretson and Stellwagen have been out of the Faculty for some time, leaving Prof. Howell as the only representative of the Philadelphia Dental College.

It is said that nearly the entire Board of Managers of the Medico-Chirurgical Hospital will have resigned before the opening of the reconstructed building. It is to be regretted that the ladies who have done such a noble work for this hospital, and have made it known throughout the city and State, are to be scattered.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.—This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dungli-

son, Lock-box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own society, signed by the President and Secretary of said society, with \$5 for annual dues. Attendance as a delegate at an annual meeting of the Association is not necessary in order to obtain membership. On receipt of the above amount the weekly journal of the Association will be forwarded regularly.

WEEKLY Report of Interments in Philadelphia, from August 15 to August 22, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess.....	1	1		Hemorrhage.....		1	2
Aneurism of the aorta.....	1			Homicide.....		1	
Abortion.....	1			Inanition.....			15
Alcoholism.....	1			Inflammation bladder.....		1	
Apoplexy.....	9			" brain.....		3	9
Anæmia.....	1			" bronchil.....		3	5
Bright's disease.....	12	1		" kidneys.....		3	2
Burns and scalds.....	3	1		" liver.....		1	
Cancer.....	12			" lungs.....		4	10
Casualties.....	8	3		" pericardium.....		1	
Congestion of the brain.....	1	8		" pleura.....		1	
" lungs.....	3			" s. & bowels.....		6	5
Cholera infantum.....		51		" spine.....		1	
Cholera morbus.....				" nerves.....		1	
Cirrhosis of the liver.....	4			Intussusception.....			1
Compression of the brain.....		1		Lymphadenma.....		2	
Consumption of the lungs.....	42	3		Marasmus.....			29
Convulsions.....		16		Neuralgia of the heart.....			
" puerperal.....	2			Obstruction of the bowels.....			1
Croup.....		2		Old age.....		16	
Cyanosis.....		7		Paralysis.....		5	
Debility.....		3		Purpura.....			1
Diabetes.....	1			Sore mouth.....			1
Diarrhœa.....	2	1		Stricture.....		1	
Diphtheria.....		8		Suicide.....		1	
Disease of the heart.....	22	3		Sunstroke.....			1
" liver.....	1	1		Syphilis.....		1	1
Dropsy.....				Teething.....		1	4
Dysentery.....		2		Tetanus.....			1
Effusion of the brain.....		1		Tumor.....		1	
Enlargement of the heart.....	1	1		Ulceration of the bowels.....		2	
Fever, malarial.....		2		Uremia.....		4	
" remittent.....	1			Whooping cough.....			1
" scarlet.....		6					
" typhoid.....	14	5		Total.....		210	219

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending August 15, 1891.

BAKER, J., Passed Assistant-Surgeon. Detached from U. S. S. "Palos," and authorized to delay reporting in the United States for six months.

SAYRE, J. S., Passed Assistant-Surgeon. Detached from the U. S. S. "Ranger," and ordered to the U. S. S. "Palos."

MEANS, V. C. B., Passed Assistant-Surgeon. Ordered to the New York Naval Hospital, September 1.

THE KELSEY ORIENTAL BATH CO., LIMITED,

H. W. KELSEY, Manager,

Turkish and Russian Baths,

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The Times and Register.

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THE AMERICAN PHYSICIAN IN LITERATURE.¹

By RESS R. BUNTING, M.D.,
PHILADELPHIA.

THE principal object in selecting the subject of our address this evening is to call attention to the fact, that although the United States possesses a greater number of medical men in proportion to its population than any other country in the world, and that abroad and even at home our profession is not popularly regarded as particularly well educated, yet we hope to be able to show by the number of our craft who have cultivated "literature as a recreation," that the American physician is not the uncultivated man he is frequently represented to be.

In Europe, for years, many medical men have been known to posterity almost solely by their literary efforts—as far back as the tenth century we find a Hebrew physician in Moorish, Spain, Juda Ha Levi, distinguished as a poet. A quatrain from one of his poems we give as an illustration of the delicate work both of the author and translator, Dr. S. Solis-Cohen:

Love came, I took him on my knee—
He stood tiptoe mine eyes to see;
He kissed mine eyes. Could farther be?
His mirrored self he kissed, not me!

Coming to later times we might mention Thomas Linacre, physician to Henry VII, first president and founder of the Royal College of Physicians, noted as a scholar and translator of many literary works; John Caius, founder of Caius College, author of a "History of Cambridge;" Richard Blackmore, whose poem, "The Creation," may be found in Johnson's British poets; Sir Thomas Browne, author of that quaint book, "Religio Medici;" Samuel Garth, physician to George I, who wrote the famous poem,

¹ An address delivered before the Alumni Association of Jefferson Medical College of Philadelphia, April, 1891.

"The Dispensary;" Arbuthnot, whom Pope has immortalized in song; Akenside's "Pleasures of the Imagination;" Armstrong's "Art of Preserving Health;" Erasmus Darwin, grandfather of the evolutionist, who wrote the poems, "Botanic Garden" and "Loves of the Plants;" Nathaniel Cotton, the friend and physician of Cowper, whose poems may be found in every manual of literature; James Cunie, the originator of the cold-water treatment of fevers, who has produced a wonderful specimen of biography in his "Life of Robert Burns;" Tobias Smollet's "Peregrine Pickle" and "Roderick Random;" John Bell, the great anatomist, author of "Observations on Italy;" John Moore's "Zeluco," a novel at one time very popular; Barry O'Meara, whose "Voice from St. Helena," descriptive of Napoleon's captivity, is a very valuable contribution to the biography of an important historical character; John Carlyle, brother of the celebrated Thomas, who practised some years in Dumfries, Scotland, and published a very creditable translation in prose of Dante's "Inferno;" and who does not remember John Brown's "Horæ Subsecivæ," a work which has been read and enjoyed by thousands.

Cadwalader Colden (1688-1776) is one of the earliest physicians who has contributed to general literature. Born in Scotland, he studied in Edinburgh, coming to America in 1708, he settled in Philadelphia, where he practised medicine for several years. He afterwards went to New York where he became Lieutenant Governor. His principal work is a "History of the Five Indian Nations," which became quite popular, and is still occasionally consulted by those interested in early colonial history.

Benjamin Church (1734-1776) graduated at Harvard, studied medicine in England, practised in Boston. He had considerable ability as a poet. His first poem, "The Choice," was written while at college. "It was written in smooth, inoffensive, heroic couplets, professedly in imitation of Pomfret's poem of the same name." In 1765 after the passage of the Stamp Act, he published a satire called "The Times." In 1769, an "Address to a Prominent Bashaw, by a Son of Liberty." "His political

satires were particularly vigorous and keen, and were on the side of liberty."

Arthur Lee (1740-1782) born in Virginia, brother of Richard Henry Lee. His principal works are "Monitor's Letters," "The Letters of Junius Americanus."

Benjamin Young Prime (1733-1791) was a native of Huntington, Long Island. He studied medicine in Leyden. "He had the pen of a ready writer, and during the Revolutionary period helped to uphold his country's cause by patriotic songs and ballads." His first poetical works were produced before the War of Independence. "The Patriot Muse," published in London in 1764, is a collection containing poems on Braddock's defeat, the taking of Quebec, on Governor Belcher, of New Jersey, etc.

Lemuel Hopkins (1750-1801) was "one of the Hartford poets of the Revolutionary era." "The Hypocrite's Hope" and "Elegy on the Victim of a Cancer Quack," are among his best known poems. One of his most beautiful poems is entitled "A Plea for Union and the Constitution," in the political poem "The Anarchiad." The eighty-eighth psalm in Barlow's collection was versified by him.

David Ramsay (1749-1815) was styled "the Historian of the Revolution." He was born in Pennsylvania, but studied medicine in Charleston, S. C. He was noted as a scholar and wrote quite a number of works, almost all of which relate to American history. The principal ones are "History of the American Revolution," "Life of General Washington," "Universal History Americanized." "It was said of him, 'As a historian he is faithful, judicious, and impartial, and his style is classical and chaste.'"

Of Benjamin Rush (1745-1813) it is scarcely necessary to speak in detail, he is so well-known to every medical man as among the foremost of American physicians. His principal works are a volume of "Essays, Literary, Moral, and Philosophical," collected and published in 1798, comprising, as the title implies, very various subjects, as "Of the Mode of Education Proper in a Republic," "Observations on the Study of Ancient Languages, with Hints of a Plan without them Accommodated to a Republic," "A Defense of the Bible as a School Book," "An Inquiry into the Consistency of Oaths with Reason and Christianity," "Thoughts on Common Sense," "Observations upon the Influence of Tobacco upon Health, Morals, and Property," "Sermons to Young Men on Temperance and Health," 1770. "Two Essays on Negro Slavery," "Four Letters to the People of Pennsylvania on the Constitution of 1776," also his vehement denunciation of the test-law. "Rush's style is natural, easy, fluent, and perspicuous; lively and vigorous; his idiom is pure, for he knew enough of both ancient and modern tongues to guard himself against impurities in our polyglot English."

James McClurg (1747-1825) was born in Virginia, studied in Edinburg and Paris, and attained great eminence in his profession. "He was well versed in literature, and one of his best poems was written jointly with his friend Judge Tucker," a few stanzas of which we reproduce, it is entitled:

THE BELLES OF WILLIAMSBURG.

Myrtilla's beauties who can paint?
The well-turned form, the glowing tint
May deck a common creature;
But who can make th' expressive soul
With lively sense inform the whole,
And light up every feature?

More vivid beauty fresher bloom,
With tints from Nature's richest loom,
In Sylvia's features glow.
Would she Myrtilla's arts apply,
And catch the magic of her eye,
They'd rule the world below.

See Laura, sprightly nymph, advance,
Through all the mazes of the dance,
With light fantastic toe;
See laughter sparkle in her eyes—
At her approach new joys arise,
New fires within us glow.

Aspasia next, with kindred soul,
Disdains the passions that control
Each gentle, pleasing art;
Her sportive wither frolic lays,
And graceful form attract our praise,
And steal away the heart.

Samuel Latham Mitchell (1764-1831) is spoken of by Stedman, in his "Poets of America," "as one who, fifty years ago, in New York, was almost the prototype *mutatis mutandis* of our Sutocrat, by virtue of his wit, learning, literary work, and civic and social importance." He was a many-sided man, resembling Benjamin Rush in this respect, having served as United States Senator and Representative. The most celebrated of his poetical productions are translations of the third and fifth of the Piscatory Eclogues (five in number) of Sanazarius, a Neapolitan pastoral poet of the age of Leo X. Among his other works may be mentioned "A Life of Tammany, the Indian Chief," "Picture of New York," and many biographical notices and addresses. As a specimen of his prose, we will quote a selection from his discourse on Jefferson, in which he speaks of the Declaration of Independence: "For sententious brevity, strong expression and orderly disposition of the topics, the reading of it always brings to my mind that incomparable performance, the Litany of the Christian Church. In this, miserable sinners invoke the Father of Heaven; in that, suffering subjects submit facts to a candid world. In the latter, the One in Three is entreated to spare from all evil and mischief those who have been redeemed; in the former, a worldly prince, for a continuance of cruelties, is denounced as a tyrant and unfit to be the ruler of a free people. In the Litany, the Church supplicates blessings and comforts from a Being willing to grant them; in the Declaration, the nation puts at defiance the power that neither pities nor forgives."

James Thatcher (1754-1844) served as surgeon in the principal battles of the Revolution. "He was one of the most elaborate and voluminous writers in the medical ranks in New England, and his works have always been sought after and read with great avidity." The following is a list of his writings: "Military Journal Kept During the Revolutionary War," "American Medical Biography," "Essay on Demonology, Ghosts, Apparitions, and Popular Superstitions," "History of Plymouth."

William A. Carruthers (1800-1850) was born in Virginia; practised in Savannah, Ga. He wrote: "The Kentuckians in New York," "The Knights of the Horse Shoe," "Life of Dr. Caldwell."

Samuel George Morton, of this city (1799-1851), wrote considerable poetry, although none of his productions have been published. His principal poems are the "Legend of Cordova," and the "Death of Talma," an Indian story. He also wrote a number of minor poems; we give a portion of one of the latter, as a specimen of his style. We must express our acknowledgments to Dr. Thomas G. Morton, who has kindly loaned the manuscript from which this extract was taken:

THE MERMAID SONG.

Deep beneath the azure wave
Of the boundless Indian sea
Is the rude, sequestered cave
Where I hold my jubilee.

Joyful are those dripping halls,
Where the sun's imprisoned light
Shines upon the coral walls
Like the meteor stars of night.

Lovely forms and sparkling eyes
Cast their wild enchantment round,
And whene'er their anthems rise
Spirits pause to catch the sound.

Ruby halls and coral shades,
Things by other eyes unseen,
Thus we roam till morning fades
From our world of waters green.

When are past the beams of day
Wide the festal scene is spread,
And we dance the hours away
Till the spell of night is spread.

Charles Caldwell (1772-1853) practised in Philadelphia in the beginning of the present century until 1819. For some years he edited the "Port Folio," one of the earliest magazines published in this city. "His articles were usually biographical, and reviews of the principal books of the day." He wrote "Life and Campaigns of Gen. Greene," "An Autobiography" published in 1855, edited by Harriet W. Warner. "The closing chapter enumerating the author's published writings and translations from 1794 to 1851, embraces a catalogue of more than 200 items, including not only magazine articles and pamphlets, but many large works as well."

Robert Montgomery Bird (1805-1854) wrote three tragedies—"The Broker of Begota," "The Gladiator," and "Orshosa;" also, several novels—"Calaver;" or, the Knight of the Conquest," which has been highly commended by Prescott; "The Infidel;" or, the Fall of Mexico;" "The Hawks of Hawk Hollow," "Shepherd Lee," "Nick of the Woods," and "The Adventures of Robin Day." He is also the author of "Peter Pilgrim;" or, A Rambler's Recollections."

Elisha Kent Kane (1820-1857) is the author of the "United States Grinnell Expedition in Search of Sir John Franklin During the Years 1850-51," "Arctic Explorations," the "Second Grinnell Expedition in Search of Sir John Franklin, 1853-55." Of his style his biographer, Dr. Elder, remarks: "In 1,500 pages of book matter he never makes a quotation to assist himself in expression except one from Bunyan, and even that is used for its allegorical effect as much as for its beauty and power. He wrote his own poetry in the higher form of prose." One instance: "He finds a poppy green under seven feet of snow." A lucidly simple explanation of its securities in a climate that runs down to 50° below zero warms his fancy into poetic sympathy with its delicate life. "No eider down in the cradle of an infant is tucked in more kindly than the sleeping dress of winter about this feeble flower-life. The first warm snows of August and September, falling on a thickly-bleached carpet of grasses, heaths, and willows, enshrine the flowery growths which nestle around them in a non-conducting air-chamber; and, as each successive snow increases the thickness of the cover, we have, before the intense cold of winter sets in, a light cellular bed covered by drift six, eight, ten feet deep, in which the plant retains its vitality." Another instance of poetical prose writing is shown in the following extract from the same book: "I am

afraid to speak of some of these night scenes. I have trodden the deck and the floes when the light of the earth seemed suspended—its movements, its sounds, its coloring, its companionships; and, as I looked on the radiant hemisphere circling above me, as if rendering worship to the unseen center of light, I have ejaculated in the humility of spirit, 'Lord, what is man that Thou art mindful of him?' And then I have thought of the kindly world we have left, with its revolving sunshine and shadow, and the other stars that gladden it in their changes, and the hearts that warmed to us there, 'till I lost myself in memories of those who were not, and they bore me back to the stars again."

For more than forty years John W. Francis (1789-1861) was one of the most distinguished citizens of New York city, and closely identified with its progress. Dr. Francis excelled in biography. He wrote sketches of Chancellor Livingston, Dr. Samuel Mitchell, Thomas Eddy, the philanthropist, and contributed to the periodicals and cyclopædias of the day. His "Old New York; or, Reminiscences of the Past Sixty Years," is a store house of information on the local history of the metropolis. In this essay most of the noted men of the day, with many of whom he was in close personal relations, are passed in review. It is with reminiscences of the dramatic profession that our author is particularly interesting. He says that "for forty years of my life I have been, with slight intermission, the medical adviser and physician of many of the leading heroes of the sock and buskin, from the arrival of the great George Frederick Cooke, in 1810, to the departure of the classical Macready, in 1849." Perhaps no one could have been better qualified to treat thoroughly the subject of "Reminiscences of Old New York" than Dr. Francis. A skilful physician, a lover of art, fond of science, somewhat of an antiquary, devoted to literature and literary men, kind, humane, sympathetic, he stands to-day as the representative of a class that is fast passing away—the family doctor—of whom a well known author has said: "There are now as few old household doctors as servants; the familiar, kindly, welcome face which has presided through generations at births and deaths; the friend who bears and keeps sacred deadly secrets, which must be laid silent in the grave, is no longer with us," especially in cities. We may judge of our author's devotion to literature by the language addressed to a friend a short time previous to his death: "If it had pleased God, I should have been pleased to live a little longer; and I should have been satisfied to set in the chimney corner and write."

James R. Orton (1806-1867), of New York, published "Poetical Sketches; or, Leisure Hours of a Student;" "Arnold and Other Poems;" Camp Fires of the Red Men; or, A Hundred Years Ago."

William Gibson (1788-1868), formerly Professor of Surgery in the University of Pennsylvania, was a thoroughly-educated man, having graduated at Edinburgh in 1809. He is the author of a very interesting book of travels—"Rambles in Europe in 1839"—describing many of the prominent men of the day.

Edward Hammond Clarke (1820-1879) has written "The Building of a Brain," and "Sex in Education," two works which have provoked considerable criticism, and given rise to some controversy in regard to the higher education of women, which may be said to be still going on. He is also the author of "Visions; A Study of False Sight (Pseudophia)," which is an important contribution to psychological study.

Jacob Bigelow (1787-1879), of Massachusetts, wrote "A Brief Exposition of Natural Medicine," to which is prefixed "The Paradise of Doctors; A Fable." A volume of humorous poems called "Ealopæn's American Rejected Addresses," now first published from the original MSS., is supposed to have been written by him; also, "Modern Queries, Classical, Professional, and Miscellaneous."

William Mason Turner (1835-1877) was born in Virginia, practised in Philadelphia for a time. He is the author of "El Kludes, the Holy," and of many tales and novelettes, most of which appeared in the *Saturday Night*, *Saturday Journal*, and *Western World*.

Isaac Israel Hayes (1832-1881) published the following works: "An Arctic Boat Journey in the Autumn of 1854," "Cast Away in the Cold," "An Old Man's Story," "The Open Polar Sea," "A Voyage in the Steamer United States," "The Passage of the North Pole" (1858), "Pictures of Arctic Travel," "Report of Dr. Hayes' Arctic Expedition made to the American Philosophical Society," "The Land of Desolation." We give a description of an iceberg from "Pictures of Arctic Travel." "A solid and a might, it is yet a noble object. The light plays through it as though the opal. Its side is blazed with crimson and gold and purple; here we see the chalcedony, transparent quartz in one place, sapphire and flashing ruby in another. Words fail us utterly in describing such a mighty work of nature—fail as do the colors of the painter. Who can describe or who can paint the leap of Niagara, or the roar that rises from the crystal abyss? The iceberg in its birth, growth, and immensity is the nearest parallel. And what pen can describe or pencil paint its age? How long since its crystals were snow flakes dropped from the air upon a Greenland mountain top? It was not a few years or even centuries ago. Its existence on earth in the great ice sea and stream has been longer than that of the whole human race from the birth of Adam."

Christopher Christian Cox (1816-1881) wrote very creditable poetry, most of which has appeared in magazines. The following poem presents a good specimen of his style.

ONE YEAR AGO.

What stars have faded from our sky?
What hopes unfolded but to die?
What dreams so fondly pondered o'er,
Forever lost the hue they wore!
How like a death knell sad and slow
Rolls through the soul "one year ago!"

Where is the face we loved to greet?
The form that graced the fireside seat?
The gentle smile, the winning way
That blessed our life path day by day?
Where fled those accents soft and low
That thrilled our hearts "one year ago?"

Ah! vacant is the fireside chair,
The smile that won no longer there;
From door and hall, from porch and lawn,
The echo of that voice is gone;
And we who linger only know
How much was lost "one year ago."

Beside her grave the marble white
Keeps silent guard by day and night;
Serene she sleeps, nor heeds the tread
Of footsteps near her lowly bed;
Her pulseless breast no more may know
The pangs of life "one year ago."

But why repine? A few more years,
A few more broken sighs and tears,
And we, enlisted with the dead,

Shall follow where her steps have led;
To that far world rejoicing go
To which she passed "one year ago."

Casper Morris (1805-1881) wrote very fair poetry. A small volume entitled "Heart Voices and Home Songs," was printed for private circulation. In the transaction of the College of Physicians of Philadelphia, 1888, there are several selections, "Heart's Desires," "The Weeping Willow," "To a Friend in Affliction," "Dew Drops," and "Lines to a Flying Fish," written during a voyage to India in 1827.

Squier Littell (1803-1886) "Dr. Littell was very fond of poetry, and himself possessed an easy facility of versification. Among his papers were many sonnets and odes, among the lighter compositions were hymns breathing the highest spirit of devotion. Of the 'Dies Iræ,' the grand old mediæval hymn there were no less than twelve metrical translations." Many of his poems are worth quoting, but we have only space for one entitled:

A DRINKING SONG.

Fill high the glass,
And let it pass
Harmonious with the sun.
We spend our days
In his bright rays,
And thus the wine should run.

Aye, let it run
And like the sun
Light, life and joy impart;
It warms the soul,
The generous bowl,
And cheers the weary heart.

Hail rosy wine,
Thou boon divine,
Whose praise is hymned by heaven:
Let bumpers fair
Our thanks declare
For bliss so kindly given.

Of American physicians both in this country and abroad, Oliver Wendell Holmes unquestionably occupies the first place as a *littérateur*. As has been said of him "he is noted as a scholar, scientist, humorist, wit, essayist, novelist, biographer, and poet. Several of his novels are of special interest to the medical profession: "Elsie Venner," and "The Guardian Angel" as illustrations of the author's "theory of heredity as a factor in human destiny." "A Mortal Antipathy" is an interesting study in psychology, "as showing the cure of a young man of an antipathy to womankind caused by an accident in early childhood."

William A. Hammond well-known as a writer, is also the author of several novels: "Lal," "Dr. Grattan," "Mr. Oldmixon," "A Strong-Minded Woman," and "On the Susquehanna."

William Starbuck Mayo (1812) is quite distinguished as a novelist. His principal works are "Kaloolah, an Autobiography of Jonathan Romer." This work, which is in reality a romance by Dr. Mayo, had extraordinary success in the United States; one thousand copies were sold in a short time. "The Berber," another of his novels, according to one critic, is decidedly better than "Kaloolah," displaying greater skill in narration.

Stephen Wicke's "History of Medicine in New Jersey, and Its Medical Men, from the Settlement of the Province to A. D. 1800," is a very interesting book, written in an attractive style, and containing much information about medical practice during the colonial period. "It is to be noted that one of the first acts of the New Jersey Medical Society after its

organization was to ordain that hereafter no student be taken an apprentice, by any member of the Society, unless he had a competent knowledge of Latin and some initiation in the Greek." In referring to physicians, in their relation to the State, our author remarks, "The leaders of public sentiment were largely from among the physicians of the colony; many of them were men of liberal education, graduates of colleges at home and abroad; many without these higher advantages were peers of their associates in intelligence, and in the usual power which a cultivated intellect and commanding influence in the community enabled them to exert." In the notices of the medical men, Dr. Stillwell (1768-1832) is mentioned as a "fine scholar and elegant speaker; as a critic he was easy and graceful." He is said to have been the author of the well-known Latin couplet with an English translation:

Just at the verge of danger, not before,
God and the doctor we adore.
When the danger's o'er, and all things righted,
God is forgotten, and the doctor slighted.

Dr. M. N. Baskett, of Missouri, published a volume of poems, entitled "Visions of Fancy." Some of the selections breathe the spirit of true poetry; we have but space for one:

TO MEMORY.

Swift guardian of the storehouse of the mind,
Open the doors, that I may search and find
The golden words which lie concealed behind.

Come with me—hold thy glimmering candle high—
And light each crannied nook, that I may spy
The place where youth's bright diamond treasures lie.

Draw back the curtains, and display to view
Fancy's bright silken garb of gorgeous hue,
With warp forever changing into colors new.

And bring me forth those bags of gleaming gold,
Which art and mirth in jovial concert hold;
And let the treasures they contain be told.

And sorrow's silvery wreath shall be untied;
And melancholy, pale and leaden-eyed,
While we are searching shall stand at our side

And tell her story with unstudied art;
Love shall reveal the pulsings of the heart,
And hope shall make the shades of night depart.

J. Portman Chesney has written "Shakespeare as a Physician: comprising every word which in any way relates to medicine, surgery, or obstetrics found in the complete works of that author, with criticisms and comparisons of the same with the medical thoughts of to-day." This is a work of considerable research, showing the wonderful—we might say intuitive—knowledge of medicine possessed by the great dramatist.

Dr. John Ordonaux, of New York, has contributed considerably to general literature. His principal work is a translation into English verse of the "Regimen Sanitatis Salernitanum; or, Code of Health of the School of Salernum." "Though written in the early twilight of the middle ages, and in inferior Latin, it at once took its place alongside of such classic productions as the 'Aphorisms of Hippocrates.' It was for ages the medical Bible of all western Europe, and held undisputed sway over the teachings of the schools next to the writing of Hippocrates and Galen. The poem is a literal translation in verse as the spirit of the original; its medical dogmas, aphoristic sayings, the difference of idiom between the two languages, and the cramping exi-

gencies of prosody would permit. The topics discussed in the poem relate to the six naturals, as they are called by the Galenic school, viz.: air, food, exercise, sleep, excretions, and the passions." We give one short extract:

MEDICINÆ LIMITES.

Contra vim mortis, non est medicamen in hortis,
Si medicos cunctos ægres posset medicari,
Divinus magis deberet juve vocari.
Non physicus curat vitam, quamvis beni longat;
Natura, quæ conservat, descendens corpora sanat.

LIMITS OF MEDICINE.

Alas, no herb in any garden grows
That can avert grim Death's unerring throes.
Were doctors skilled enough to undermine
Each fell disease, they'd almost be divine.
But, as all practice shows, no doctor can
Make life anew, though he may stretch its span;
Nature this power most jealously reserves—
Alone the body heals and life preserves.

E. Allen Wood, of Pittsburg, Pa., has manifested considerable literary ability, as shown in several of his works, of which the principal is "Tancredi; or, A Tale of an Opera." This work is, we think, a sufficiently meritorious performance to encourage its author to continue his writings in this line. He is also the author of two librettos, one of which, "The Lion of Peru," exhibits a good deal of poetical ability.

As the three following authors are from this city they may be properly considered in this place.

Dr. Hartshorne's literary ventures may be chiefly described as follows: His first published piece of work was "Woman's Witchcraft; or, The Curse of Coquetry," a dramatic romance. This came out in 1854, under the *nom de plume* of Corinne L'Estrange. Much later was "Summer Songs," by H. H. M., 1856; "A Bundle of Sonnets and Other Poems," in 1888, and added to and reissued in 1890; not published, but printed for the author, "Bertram the Prince." Some of his poems have appeared in magazines. Two in *Lippincott's*, several years ago; one in the now defunct *Penn Monthly*; one in the *Critic*; several in the *Philadelphia American*; some in the *English Friends Quarterly Examiner*, and a great many in the *Friends Review*. One of his poems may be found in the Centennial Volume of the College of Physicians of Philadelphia, having been read at the Centennial dinner. He has been a frequent contributor to *Vanity Fair*, a humorous weekly published in Philadelphia about 1861, and to *Punchinello*, which followed it for a time. Dr. Hartshorne's verse is marked by an entire absence of meretricious attempt at effect, its ends being gained by a chaste, dignified, and earnest style fitted to its noble motive. He is the poet of Faith, Hope, and Love. In blank verse, the most difficult species of metrical composition, he has been very successful, his lines being both flowing and musical. A fair specimen of his style is shown in

THE QUAKER MEETING-HOUSE.

Welcome, amid a world of noise,
This hush of deep tranquility;
Here may we merge our cares and joys
In harmony!

O, could we with pure insight look
Beneath the outer mien of rest,
Interpreting that mystic book,
The human breast.

We would not deem untaught of strife
Hearts that speak here of calm;
Souls that through death have conquered life,
Thro' sorrow's balm.

Might we with lofty vision reach
Skies that meet Woolman's gaze,
Or list the songs that Whittier's speech
But half conveys.

No more, to us a voiceless prayer,
The winged spirit's melody;
No choir e'er poured upon the air
Such Litany.

Enter and share one sacred hour,
A holy Eucharist, with Him
Who asks no priest's dispensing power,
Or cloister dim.

No vast cathedral dome or aisle,
No organ thundering above;
Only the light of Jesus' smile,
His words of love.

Still sweetest grow the joys of life
Where victory has brought repose;
God gives no peace but after strife,
No thornless rose.

Thomas Wistar is essentially a lyrical poet; his verses exhibit a softness and rhythm, and a tenderness of feeling, naturally adapted to the lyre. We have heard him say that most of his verses were penned to satisfy an innate longing for music in his soul. Writing occasionally on such every-day topics as have impressed his emotional nature, he has succeeded in throwing a charm over the commonest themes. Whether he pays a tribute to a deceased friend, or to a faithful dog; whether he sings a summer requiem or an autumn song; whether it be his aim to "point a moral or adorn a tale," his verses all have a pleasing finish and freshness of sentiment which makes them edifying without cant, and subjective without a taint of morbidity. Many of Dr. Wistar's poetical contributions have been published in the *Public Ledger*. His longest poem is entitled "The Dispensary Doctor." A very pretty poem of his is one

TO A FRENCH MARIGOLD.

Marigold, sweet Marigold,
That in my trembling hand I hold,
While gazing on thy mingled hues,
Why do mine eyes with tears suffuse?
Why do I press thee to my heart?
Why does thy smile such sadness bring?
Why do my tears unbidden start
At sight of such a beauteous thing?

Marigold, sweet Marigold,
The story may as well be told
Why, more than any other flower,
Thou movest me with tender power.
The roses climb on kingly tombs,
The violets tell of early love,
On bridal veils the orange blooms,
But none like thee my soul can move!

Marigold, sweet Marigold,
Thou risest from the sacred mould
That hopeless hides from mortal gaze
The loved one of my early days.
The soft brown of her tender eyes,
The golden glory of her hair—
All that is left from Paradise—
Thou holdest in thy chalice fair.

Dr. William Hunt has translated a number of poems from the German, which may be found in the "Poetry of Other Lands," published in this city. One of his best is "The Midnight Review," in which the ghost of the great Napoleon passes his phantom army in review:

From his grave the drummer rises
At the twelfth hour of night,
And goes his rounds with his drumming,
Marching to left and right.

With his fleshless arms he rattles
His drumsticks good and true,
Beats many an old tune loudly,
Reveill   and tattoo!

The music rolls so strangely
And with such ringing staves,
That the old dead infantry startle,
And waken in their graves.

Those who lie in the Northland,
Stiff frozen in ice and snow,
Those who were slain in Italy,
Under the sun's hot glow,

Those whom the Nile slime covers,
Those under Arab sands,
Out from their graves they clamber
With their muskets in their hands.

From his grave the trumpeter rises
At the twelfth hour of night,
The assembly he plays on his bugle,
Turning to left and right.

Then mounted on ghostly horses,
Dead troopers come in swarms,
And from the old famous squadrons,
Carrying their varied arms.

On white skulls grinning ghastly,
They wear their helmets bright,
Their bony hands are holding
The trusty swords upright.

From his grave the General rises
At the twelfth hour of night,
Slowly he rideth onward
With his staff at left and right.

The columns present then shoulder,
And at the Commander's cry,
With noisy kling-klang marching,
The ghastly host goes by.

The staff form a ring about him,
With marshals and generals near;
The Captain turns to his neighbor,
And whispers a word in his ear.

The word is taken up quickly,
Resounding now and again,
"Soldiers! France!" is the watchword,
And the counterign "Sainte H  l  ne!"

This is the parade of heroes
Whom the great Emperor knew,
When in the fields Elysian
He held his midnight review.

We would crave your indulgence awhile longer for the consideration of these authors, dead and living, either graduates or teachers of the Jefferson Medical College.

John Kearsley Mitchell (1798-1858) was distinguished both as a physician and as a man of letters. He wrote two quite lengthy poems entitled "Indecision" and "St. Helena," also a number of miscellaneous pieces, all of which are of sufficient excellence to give him a permanent position in the poetical literature of this country. "Indecision," his longest poem, intended, says one of his friends, "to convey a moral of the most useful character by proving

That indecision marks its path with tears,
That want of candor darkens future years;
That perfect truth is virtue's safest friend,
And that to shun the wrong is better than to mend."

The late Prof. Dickson says of him, "His cultivated imagination and practised ear led him to facile versification; and his fine taste gave sweetness and the charm of musical diction to his productions of this kind." The minor lyrical pieces, several of

which have been set to music, are melodious, delicate and graceful. We give two selections from his poems.

Extract from a poem entitled "Blessed are the dead which die in the Lord" (Rev. xiv.)

'Tis a blessing to live, but a greater to die,
And the best of the world, is its path to the sky—
Be it gloomy or bright, for the life that He gave,
Let us thank Him—but blessed be God for the grave!
'Tis the end of our toil; 'tis the crown of our bliss,
'Tis the portal of happiness—aye but for this,
How hopeless were sorrow, how narrow were love.
If they looked not from earth to the rapture above!
But the portals of death open out on the skies,
And the mortal who enters in ecstasy flies,
An angel of light to the throne of the King;
While the echoes of heaven in harmony ring
With the song of the seraphs, oh! blessed are they
Who die in the Lord, and from earth come away—
They rest from their labors—the works of their love
Have followed, and crown them with glory above!

THE NEW SONG AND THE OLD SONG.

A new song should be sweetly sung,
It goes but to the ear;
A new song should be sweetly sung
For it touches no one near:
But an old song may be roughly sung,
The ear forgets its art,
As comes upon the roughest tongue
The tribute to the heart.

A new song should be sweetly sung,
For memory gilds it not;
It brings me back the strains that rung
Through childhood's sunny cot.
But an old song may be roughly sung,
It tells of days of glee
When the boy to his mother clung,
Or danced at his father's knee.

On tented fields 'tis welcome still;
'Tis sweet on the stormy sea,
In forest wild, on rocky hill,
And away on the prairie lea—
But dearer far the old song
When friends we love are nigh,
And well-known voices, clear and strong
Unite in the chorus cry.

Of the old song, the old song,
The song of the days of glee,
When the boy to his mother clung,
Or danced on his father's knee!
Oh, the old song, the old song!
The song of the days of glee,
The new song may be better sung,
But the good old song for me!

Of Charles D. Meigs, formerly Professor of Obstetrics in this institution, it has been well said by his grandson, "It is not at all wonderful that fellows of colleges in England, or industrious Germans who have set apart their lives to fathom all the lore of time should become learned; but that a man upon whom not learning, but a harrassing profession had the first claim, should reach such a height of erudition is truly a rare sight to behold. There can be few men in active professions in this country who can show a small part of the learning that was my grandfather's, for he was thoroughly versed in all the great histories of the old and new writers. Livy and Sallust, Thucydides, Guicciardini and Gibbon, he knew them all. The ways of science were not hidden from him. The scant shreds of mystery that have been picked up in Egypt, the dark and nonsensical beginnings of the Greeks, the dreary wilderness of the Arabians, and the copious fields of natural magic that abounded in the middle ages, the great revolution planned by Bacon, the discoveries wrought by Newton, and the further unveiling and prying into the secrets of nature that have gone on in our time, all were open to him,

and he saw the work of each of them." The principal work of a strictly literary character left by Dr. Meigs is a translation of a novel by Count de Gobmeau, called *Lé Ablage de Egyptians*, a tale of the twelfth century.

Daniel Garrison Brinton (J. M. C., 1860), widely known in this country and abroad for his writings on archaeology, has contributed considerably to general literature. The following list includes those of his works of a strictly literary character: "The Floridian Peninsula, its Literary History, Indian Tribes, and Antiquities," "The Myths of the New World, a Treatise on the Symbolism and Mythology of the Red Race of America," "The Religious Sentiment, its Source and Aim; a Contribution to the Science of Religion," "American Hero Myths, a Study in the Native Religions of the Western Continent." "In the Great Conflict Between Scientific Thought and Religious Dogma," Dr. Brinton has always occupied a prominent position. His volume on the "Religious Sentiment" begins by an absolute rejection of the supernatural as such, and explains all expression of the religious feeling as the results of familiar physical and mental laws (*Popular Science Monthly*, April, 1891).

One of the most attractive of this author's works is "The Myths of the New World," which gives an account of the religious ideas of the aborigines of this continent. The opinions advanced are somewhat new to the general reader. The different Gods of the Indians are discussed, and considered by the author "impersonations of light." The subject of the deluge is given a rational explanation. The origin of man, the native ideas of the soul, and the influence of the religious on the morality of the Indians are also discussed.

Robley Dunglison born in 1798, died 1869, had a world-wide reputation as a lecturer on physiology in Jefferson Medical College. His colleague, the late Prof. S. D. Gross, says of him "He was no ordinary man, indeed in one sense of the term he was an illustrious man; a great scholar, an accomplished teacher, a profound physiologist, an active thinker, a facile writer, a lucid, erudite and abundant author. No physician on this continent has surpassed him in the magnitude of his labors. Dunglison wrote not only rapidly but well, possessing singular facility of diction and power of utterance. His style was clear and classical, the construction of his sentences harmonious, the arrangement of his matter orderly and systematic. Always perfect master of his subject, and thoroughly versed in the art of composition, it was no labor for him to adapt his language to the comprehension of the dullest intellect." He was one of the founders and editors of the *Virginia and Literary Museum*, and *Journal of Belles-Lettres, Arts and Sciences*, a weekly periodical issued at Charlottesville in the interest of the University. Dr. Dunglison furnished many of the leading and more elaborate articles. Most of the articles were of a non-professional character, and displayed unusual learning and research, as "Fashion in Dress in England at the Commencement of the Seventeenth Century," "Onomatopœia," "Modern Improved System of Road Making," "Certain Ceremonies Connected with the Dead," "Anthropology," "Blondel and Richard the Lion Heart," "English Provincialisms," "Penitentiary Discipline," "Universities," "Legends of the English Lakes," "Superstition," "Americanisms," "Early German Poetry," "Etymological History," "Sancrit Language," "Ancient and Modern Gymnasia," "Cradle of Mankind," "English Orthœpy,"

"Canals of the Ancient," and "Jeffersoniana." Quite a number were of exhaustive character.

Samuel Henry Dickson (1798-1872) who was successor of Dr. J. K. Mitchell, in the chair of practice of this college, wrote on literary and current topics, and on several of those subjects which are on the border-land between public domain and the domain of pure science. The following are his chief works: "Essays on Life," "Sleep and Pain," on "Memory," on "Pleasure," "Essays on Slavery," "Orations and Addresses," "The Esthetics of Suicide." The following lines show a fair specimen of his style:

I seek the quiet of the tomb,
There would I sleep;
I love its silence and its gloom
So dark and deep.

I would forget the anxious cares
That rend my breast,
Life's joy and sorrows, hopes and fears,
Here let me rest.

Weep not for me nor breathe one sigh
Above my bier;
Depart and leave me tranquilly,
Repose is here.

The contributions to literature of James Aitken Meigs (1829-1879) consist mostly of poetry, of which the principal is a valedictory poem delivered at the Fifty-fourth Annual Commencement of the Jefferson Medical College, entitled "The Epithalamium of the Young Physician in Taking Fair Hygeia as his Bride." The "Song of Labor" in this poem shows a good example of the style of the author:

You must labor. Of oldest date,
This law compulsory began
While chaos kept disordered state,
Ere yet from dust was fashioned man.
Expanding from this primal source,
A power in creation's scheme,
It runs unrestingly its course,
And swayeth all with might supreme.

You must labor. The heaving surge
Of ocean bears upon its crest
The mandate. On the beetling verge
Of rocks, on hills and plains impressed
Indelibly, lo! labor's seal—
On rivers borne, on lake and spring,
In sunbeams glancing, that enwheel
Our globe with blessing-laden wing.

The searcher in the dim abodes
Where science guards her treasured love;
The delver midst the golden lodes
Of wisdom's richest, purest store;
The student whose untiring eye
The touch of healthful sleep scarce knows;
The sons of toil, whose heart-rung cry
No respite winneth from their woes.

The merchant prince with soul-care clad,
The statesman clothed in arrogance
And power, the merry ones and sad
Who thickly crowd life's shadow dance;
Strong industry, wan penury,
Restless ambition seeking fame,
Gray sorrow, patient misery—
All, all its potency proclaim.

You must labor. Thus God hath said:
"Thou, in the sweat which doth bedew
The face shall eat thy daily bread."
The healing art shall yield to you
Reward through ceaseless toil and care,
In saving men from sickness, pain
And death, and worse than death—despair,
Which freezes heart and palsies brain.

You must labor with noblest aim,
If on the massive architrave
Of fame's entablature your name

In living lines you would engrave.
No tarrying the road beside,
No resting from the work, though worn;
Still toiling at the eventide
As at the noon and early morn.

Samuel Drake Gross (1805-1884). This distinguished physician, whose reputation is world-wide, is the author of the following works: "History of American Medical Literature," "An Autobiography," with sketches of his contemporaries, edited by his son and published since his death; "Lives of Eminent Physicians and Surgeons of the Nineteenth Century." The latter work ranks in influence with the biographies of Williams and Thatcher.

Dr. Abraham Coles (J. M. C., 1835) has published Latin hymns, with original translations, comprising: (1) "Dies Iræ," in thirteen original versions; (2) "Stabat Mater" (dolorosa); (3) "Stabat Mater" (speciosa); (4) "Old Gems in New Settings," being additional selections from mediæval hymnology; "The Life and Teachings of Our Lord," in verse, being a complete harmonized exposition of the four Gospels, with original notes, etc., in two volumes, viz.: Vol. I, "The Evangel;" Vol. II, "The Light of the World." His most important original poems are "The Evangel" and "The Microcosm." The latter is a physiological poem, which begins with man as "architype or ideal exemplar of all animals, treating necessarily of the different parts of the human body. The poem concludes with a triumphant anticipation of the Resurrection, when the dead in Christ shall rise with new bodies, made as unto His glorious body." We give one of its most forcible passages:

Dear God! this body which, with wondrous art,
Thou hast contrived and finished part by part,
Itself a universe, a lesser all,
The greater cosmos crowded in the small—
I kneel before it, as a thing divine;
For such as this did actually enshrine
Thy gracious Godhead once, when Thou didst make
Thyself incarnate, for my sinful sake.
Thou, who hast done so very much for me,
O, let me do some humble thing for Thee!
I would to every organ give a tongue,
That Thy high praises may be fitly sung;
Appropriate ministries assign to each,
The least make vocal, eloquent to teach.

Dr. J. M. DaCosta, our well-known Professor of Practice, is the author of a book entitled "Harvey and His Discovery." There are some beautiful passages in this book. One of them is the description of the refusal of Harvey to accept the position of President of the College of Physicians, and the re-election of the former incumbent. "It must, indeed, have been a signal occasion when Harvey refused a post considered the most desirable in the profession. There stands the old man with snow-white head, with broad forehead and intellectual look, with which Jansen has made us so familiar; there he stands, his eye full of its old fire, his gesture rapid. As he begins to speak, the periwigs cease wagging, the gold-headed canes are more firmly grasped, the gentle ripple of professional gossip is hushed; all is attention, respect. Around him in the spacious hall which his munificence has created are gathered nearly all the distinguished men in the English profession." After describing the prominent medical men present, he says: "And it is very likely that at this memorable gathering there were two present not at that time Fellows of the College, but brought in, as they were on a visit to London; one, plain of dress, sober of speech, came up from Norwich, where he had written that strange book, "Religio Medici," which,

with his "Urn Burial," is the delight of scholars—quaint old Sir Thomas Browne; the other a young man, showing in his bearing his soldierly training, a Fellow of All-Souls' College, Oxford, a staunch Parliamentarian, but, with his flowing locks and finely-cut features, having more the air of the Cavaliers he disliked, than of the Roundheads he favored; the only one in that whole chamber who was almost to rival Harvey's fame, the one who taught us to investigate disease without preconceived notions, and who has left a reputation great among the greatest—Thomas Sydenham, the English Hippocrates."

Edward Warren, a graduate of Jefferson Medical College, 1851, is the author of "A Doctor's Experiences in Three Continents," which, the author says in his preface, "recounts the history of a career in which the domination of a strange but imperious destiny has manifested itself in the transformation of a country doctor into a professor, a surgeon-general, and a Chevalier of the Legion of Honor, and the transference of the scene of his labors from the swamps of Carolina to the shores of the Chesapeake, the borders of the Nile, and the quarters of the Seine. He pays the following tribute to our college: "In the month of October, 1850, I went to Philadelphia to complete my studies. My father was a graduate of the University of Pennsylvania; but, after due consideration, I matriculated at the Jefferson Medical College, and I never have had reason to regret the choice. Dr. Mutter was certainly one of the most eloquent and instructive lecturers, and Dr. Pancoast one of the best operators that this country has produced, while their colleagues were generally men of ability and learning."

J. Plummer Bates, Jefferson Medical College, 1862, has written a number of essays and poems entitled "Dreaming," "Alone," "Fading," "The Indefinite," "The River Time," "The Round Table Papers," "The Snow," and others appearing in the *Methodist Protestant* from 1862 to 1867.

Charles Carroll Bombaugh, Jefferson Medical College, 1853, is the author of a "Book of Blunders," "The Literature of Kissing," gleaned from history, poetry, and anecdote (the only book on this subject in the English language), and "Gleanings for the Curious from the Harvest Fields of Literature," a melange of excerpts and of all sorts of curious information. The author, in his preface, says: "It is the purpose of these Gleanings to compass such sweet variety by conducting the reader here through the green lanes of freshened thought, and there through by-paths neglected and gay with the moss of ages; now amid cultivated fields, and then adown untrodden ways; at one time to rescue from oblivion fugitive thoughts which the world should not willingly let die, at another to restore to sunlight gems which have been too long underkept and down-suppressed."

Dr. Silas Weir Mitchell is almost as well known in literature as in medicine. He is equally distinguished as an essayist, novelist, and poet. The following is a list of his works: "Far in the Forest," "Nephzi-bah Guinness," "Thee and Thou," "A Draft on the Bank of Spain," "In War Time," "Roland Blake," "Nurse and Patient and Camp Cure," "Doctor and Patient," "Prince, Little Boy, and Other Tales Out of Fairyland," "The Hill of Stone, and Other Poems," "A Masque, and Other Poems," "The Cup of Youth, and Other Poems." "In War Time" "is an eminently delicate interpretation of the lives of a group of people, each of whom is made admirably real by a succession of minute and care-

fully-studied touches. In the local setting of the story the author blends all the details with a completely harmonious effect. The scene is laid in Germantown, and the life depicted is that of a circle calmly conscious of the possession of hereditary opulence and culture, and the corresponding sentiments and obligations. The feminine element predominates, and received the sympathetic treatment of a perfect intimité. The distinction of repose is not absent from the style or from the movement of the story, which, as will have been seen, invites a more attentive reading than the ordinary novel is expected to receive." The following, from the *Public Ledger*, we think a very good criticism of his poetry: "Dr. Mitchell's poetry is full of the sincerest feeling, and of the most brilliant imagining. He creates a character of man or woman, or he paints pictures of brooks, or trees and flowers, of mountain tarns; or he describes the violet's scent, the daisy's dress, the timid breeze's shy caress; and the man or the woman who has sprung from the realm of his fancy, as Aphoodite from the foam of the sea; and that he would exalt becomes not only real, but of finer clay, of nobler spirit, than ordinary mortals; his pictures of natural objects glow with sunset beauty and splendor, and are filled with warmth, tenderness, and charm of autumnal afternoons." We reproduce two specimens of his works, one from "The Doctor and Patient," and the following, one of his minor poems:

A DECANTER OF MADEIRA, AGED EIGHTY-SIX,
TO GEORGE BANCROFT, AGED EIGHTY-SIX, GREETING.

Good Master, you and I were born
In "tea-cup days" of hoop and hood,
And when the silver cue hung down,
And toasts were drunk and wine was good.

When kin of mine (a jolly brood)
From side-board looked, and knew full well
What courage they had given the beau;
How generous made the blushing belle.

Ah, me! what gossip could I prate
Of days when doors were locked at dinners!
Believe me, I have kissed the lips
Of many pretty saints or sinners.

Lip service I have done, alack!
I don't repent; but come what may,
What ready lips, Sir, I have kissed,
Be sure at least I shall not say.

Two honest gentlemen are we—
I Demi-John, whole George are you;
When nature grew us one in years
She meant to make a generous brew.

She bade me store for festal hours,
The sun our south-side vineyard knew;
To sterner tasks she set your life—
To statesman, writer, scholar, grew.

Years eighty-six have come and gone;
At last we meet—your health to-night
Take from this board of friendly hearts,
The memory of a proud delight.

The days that went have made you wise;
There's wisdom in my rare bouquet;
I'm rather paler than I was,
And, on my soul, you're growing gray!

I like to think when Toper Time
Has drained the last of me and you,
Some here shall say, "They both were good—
The wine we drank, the men we knew."

"As a profession, it is my sincere conviction that in our adherence to a high code of moral law, and in the general honesty with which we do our work, no

other profession can be compared with ours. Our temptations, small and large, negative and positive, are many and constant, and yet I am quite sure that no like group of men afford as few illustrations of grave moral weaknesses. It is commonplace to say that our lives are one long training in charity, self abandonment, all forms of self restraint. The doctor will smile at my even thinking it needful to state the fact. He begins among the poor; all his life, in or out of hospitals, he keeps touch of them always. He sells that which men can neither weigh nor measure, and this sets him over all professions, save one, and far above all forms of mere business. He is bound in honor to profit by no patent, to disclose all he has learned, and to give freely and without reward of his best care to all others of his profession who may be sick. What such a life makes of a man is largely a question of original character; but in no other form of occupation is there such constant food useful to develop all that is best and noblest."—(*Doctor and Patient*.)

The last author whom we shall consider is Dr. Solomon Solis-Cohen, a graduate of Jefferson in 1883, and one of the teaching staff of this college and at the Polyclinic, well-known as an essayist and a verse writer. We shall speak only of his poetry to-night. His first boyish verses were parodies and imitations which he began writing about 1870. He next wrote original humorous verses, and began publishing hymns and religious poetry about 1876. His work has not been collected into book form, but is scattered in magazines and journals. He is probably most successful in the serious treatment of elevated themes, but possesses a light and graceful touch in dealing with themes of the imagination and fancy. In addition to his original work he has translated from the Hebrew many of the verses of the Jewish poets, who flourished in Moorish Spain from the tenth to the fourteenth century. Dr. Solis-Cohen's best poem is probably one entitled "I Know that My Redeemer Liveth," of which Whittier has spoken in terms of the highest approval, and has incorporated it in the new edition of his "Songs of Three Centuries." Its merits are its sincerity and earnestness and the simplicity of its style, like one of the Psalms of old. Some of the strongest and most beautiful lines, notably the grand outburst of faith with which it concludes, are made up entirely of words of one syllable. It is the fervid protest of the reverent student of nature against the doubting spirit of the age, the false science which denies to man the power to know his Maker. The poet cries:

Shall the mole from his night underground
Call the beast from the day glare to flee?
Shall the owl charge the birds "I am wise
Go to! seek the shadows with me?"
Shall a man bind his eyes and exclaim
"It is vain that men weary to see?"

He sings that the world is not dark. Though many turn from the light it is still there to guide those who will walk by it. He hears the voices of the bird and the beast, the trees and the grass

Yea, a voice from the stones I have heard
And the sun and the moon and the stars in their
Courses re-echo the word.

And one word speak the bird and the beast,
And the hyssop that springs in the wall
And the cedar that lifts its proud head upon
Lebanon stately and tall,
And the rocks and the sea and the stars
And know! is the message of all.

We must question and learn, as did Galileo and Newton and Draper—then the answer will be nigh.

Whence came life? In the rocks is it
Writ, and no finger hath graven it there?
Whence came light? Did its motions arise
Without bidding? Will science declare
That the law ruling all hath upsprung
From no mind that abideth no where?

Yea, I know! cried the true man of old;
And whoso'er wills it may know,
My Redeemer, He liveth! I seek for the sign
Of His presence, and lo
As He spoke to the light, and it was so
He speaks to my soul and I know.

"When Love Passed By," another of Dr. Solis-Cohen's poems, would be worth quoting in full, as a specimen of an entirely different style, but we have room for only the two concluding stanzas. The theme is second only to that treated in the foregoing poem, for surely God and Love are most significant to humanity. After telling how Love passed by while the man was busy with his plowing, and again while he was busy at his sowing, and called him to follow; and how he refused to go, but said he would follow when his plowing was done; and again when his sowing was done—the poet continues:

I was busy with my reaping
When Love passed by.
"Come," she cried, "thou plantest grieving,
Ripened sorrows art thou sheaving—
If the heart lie fallow, vain is
Garnered store. Thy wealth of grain is
Less than Love's least sigh.
Haste thee, for the hours fast dwindle
Ere the pyre of Hope shall kindle
In Life's western sky."
But I answered: "I am reaping;
When the song of youth and maiden
Home the hockcart comes full laden,
I will follow."

Love passed by.

I had gathered in my harvest
When Love passed by.
"Stay," I called to her swift speeding—
Turning not, my cry unheeding,
"Stay, O Love! I fain would follow;
Stay thy flight, O fleet-winged swallow,
Cleaving twilight sky.
I am old and worn and weary,
Void my fields and heart—and dreary—
With thee would I fly.
Sad ghosts of my dead hopes haunt me,
Fierce regrets like demons taunt me—
Stay, I follow!"

Love passed by.

With another quotation, showing again a different style, but still simple and earnest, we will conclude our review of this author. It is a sonnet called

THE TSAR'S ANSWER.

In brute joy gloating o'er his victim's pain
With knout uplifted savage Russia stands—
A monstrous terror shadowing the lands—
And scowleth sullen hatred and disdain
On them that seek—albeit a suppliant train
Meek breathing honeyed words—to stay his hands
From scourging innocence. The dreadful strands
For answer whirl on high and smite again.

Plead with the vulture poised in mid-air;
Plead with the famished tigress crouched to spring;
Plead with the serpent, hissing ere he sting;
Plead with the pestilence—for these may spare,
But never will a Tsar heed Mercy's prayer,
Till from the cannon's throat its accents ring.

We are well aware that in the necessarily limited space permitted to an address of this character, a

mere outline has been given of the contributions of our physicians to *belles-lettres*. We trust, however, sufficient of their work has been spoken of to prove that the American physician is the peer of his European confrère, and take pride in the fact that many of our literary doctors acknowledge the Jefferson Medical College as their Alma Mater.

RIDGE AVENUE, ROXBOROUGH, PHILA.

CHLORALISM.

By J. B. MATTISON, M.D.,

BROOKLYN, N. Y.

Medical Director Brooklyn Home for Habitues; Member Amer. Med. Assn., Amer. Assn. for the Cure of Inebriety, N. Y. Academy of Medicine, N. Y. Medico-Legal Society, N. Y. Neurological Society, Medical Society of the County of Kings.

CHLORALISM has largely waned in the last half decade. The advent of other—though not better, in some respects, I am bound to say—hypnotics has lessened the growth of a toxic disease that, ten years ago, bade fair to assume large proportions and wreck some of the best in the land. Its victims came mainly from the educated rank of our people—brain workers—those who, by super-zealous devotion to duty or long and exhausting vigils over mental toil, had banished the “sweet restorer.” Many chloral inebriates were found among the large and—at that time more than now—enlarging number of morphine habitués, who were impelled to its use by the inroads of the poppy along insomnic lines.

So, too, among rum-takers; the marvelous power of chloral in wooing the drowsy god, after a big debauch, led to its use—with or without medical counsel—that, at times, could only be called reckless, and that again and again brought the long last sleep.

Besides the risk of confirmed addiction from the uncared use of chloral, it has a pernicious power *per se* that is unique—greater than morphine, though the latter is more snareful and more difficult to cure. Regarding this effect, along various lines—psychic and somatic—no more complete picture has ever been presented than that by the writer, eleven years ago, in a paper—*Chloral Inebriety*—read before the Medical Society of the County of Kings, April 15, 1879 (at command of any one who may desire and will write for a copy), which contains a striking case, akin to the one presented in this paper, noting a special effect of chloral, and mainly peculiar to that drug.

Quoting from that paper: “I refer to peculiar pains in the limbs, simulating neuralgia or rheumatism; yet, unlike the former, as they are not limited to the course of the nerves, and differing from the latter in not being exactly *in* the joints, but rather *girdling* the limbs just above or below them, without pain or pressure, and unaggravated by movement. Their diagnostic import is, that they may be mistaken for the diseases they resemble, and, their origin being unsuspected, prove obstinate to treatment.”

Similar pains are sometimes noted in chronic chloroform-takers. Anstie thought the latter fact afforded some support to the theory that chloral acts by evolving chloroform in the blood. He expressed the opinion that some cases of supposed rheumatic or neuralgic pain would be found, on careful inquiry, to be due to chloral-taking, and cited the following case, in which this symptom was prominent:

A. B., physician, began the use of chloral February 1, 1873, in 30-grain doses, to procure sleep when kept awake by great anxiety. In two months noticed inflamed and weakened eyes, with scalding tears.

Continued the drug, however, sometimes increasing the dose and repeating it. From April to August the usual amount taken was 1 drachm; in the latter month he commenced using it during the day, one to three times. About December 1 he began to realize the amount he was daily taking, and found it half an ounce—sometimes more. He now began to complain of severe general pains, especially about the joints, which grew worse in the moist air of London; there was no tenderness, and they were not increased by motion. Chloral did not relieve them, except when it put him to sleep. Soon after this he made a mistake in his dose, using from a stronger solution, which brought on the pains with frightful severity, and Dr. Anstie was summoned. He found him with suffused eyes, haggard features, sleepless, peculiar, broken speech, partial paraplegia, loss of co-ordination, and excessive joint pains. An examination disclosed that he had taken more than an ounce of chloral the preceding day. It was at once withdrawn. *Cannabis indica* was used to relieve the nervous disturbance, tonics given, and under this treatment he recovered.

The following case under our care is of interest:

Mrs. A., aged thirty-seven years, began to suffer from insomnia sixteen years ago, which persisted in varying degrees until December, 1889, when a severe injury, confining her to bed for fourteen weeks, increased this wakeful condition until it became essential to compel sleep. Chloral secured it. The initial dose was 15 grains, at bed-time. This amount sufficed for fourteen months, when she began to suffer severe limb pains—not increased by pressure or movement—which soon resulted in a sharp and prolonged bout of hysteria and nervous prostration, with increased agrypnia. The chloral dose was doubled, but without effect. During several weeks various hypnotics were tried, with ill success. Her physician declared: “In the endeavor to give her sleep I almost exhausted the ‘Pharmacopœa.’” Finally, hyoscyamine was given. This broke the insomnia; but, for some reason, after a week’s use, recourse was again had to chloral; and this was continued until a week before coming to us, when a new medical adviser decreased it and gave hyoscyamus, with the result of much lessened pain but little better sleep.

At time of placing herself under our care, Mrs. A. was weak, sleepless, anorexic, and greatly depressed. Her physician wrote: “This chloral-taking, with the shock from the horrible injury she received, has almost entirely wrecked her nervous system.” The chloral was at once withdrawn, and 40 grains of chloralamid given. It brought a full night’s sleep, without ill after-effects. During the following fortnight various hypnotics—sulfonal, paraldehyde, morphine, codeine, hyoscyne, somnal, and chloralamid were used. The last-named proved by far the best—always fetching refreshing slumber for several hours—and was continued. Meantime she was placed on large doses of strychnine, and 2 grains thrice daily of quinine. In ten days increased strength permitted a drive, and in a few days more her appearance at every meal. The peculiar pains steadily lessened, and in a fortnight were a thing of the past. The chloralamid was gradually decreased during a month, and then ended. The strychnine and quinine, after a few weeks, were followed by phosphorus and Fowler’s solution, with an eight-minute bed-time galvanic séance. Under this treatment Mrs. A. progressively improved in every way, and at this writing she asserts that “life is worth living,” and is “feeling better than for years.” To complete and confirm

convalescence we have advised, in view of her insomnic record, a sea trip, with a short tour abroad, and the winter spent in Bermuda.

This case is instructive. It proves anew the snareful effects of chloral; yet, despite this and other drawbacks, we consider it, in some form, first among hypnotics. Of all the new claimants for favor in insomnia, the two most effective contain it—somnal and chloralamid. The latter we think the better. While deeming it less likely to enslave by continued use, it certainly is less depressing, and the sequelæ are less unpleasant. We use it largely—dose, 30 to 60 grains on tongue at bed-time—and regard it a very valuable addition to our resources.

BROOKLYN AVENUE.

DE GEMPT urges the use of caffeine in cases of threatened collapse in various asthenic diseases, but especially in acute pneumonia, and cites several cases in which it was successfully used in conjunction with stimulants. He believes the drug indicated in the course of acute pneumonia when there is evidence of cardiac failure, such as rapid, irregular pulse, with lowered tension. Should the pneumonia be of asthenic type, it should be used from the onset, and the earlier in the course of the disease it is used after asthenia develops, the better. In cases of this sort, caffeine, in doses of .35 gramme four to five times daily, raises the arterial tension, diminishes the rate of the respiration and pulse, and lowers the temperature. Its action is prompt; but in urgent cases it had better be used hypodermically. It is advisable to continue it for a brief period after the febrile deferescence.—*Boston Med. and Surg. Jour.*

RHINOSCLEROMA.—This is a disease that Kaposi and Hebra claim in differentiating; the result of their efforts commenced twenty years ago. Kaposi showed two typical cases of the disease at his clinic, one newly admitted, another who had been under treatment for a year. The new patient had the alæ of nose widely distended and thickened, as well as the septum and mucous membrane. When the nose is caught between the thumb and finger, the whole feels as if two bones were pressed. The nares are very narrow, owing to the great thickening around, causing the patient to breathe through the mouth.

The other case under treatment had much the same appearance about the nose, but the upper lip and soft palate were also greatly thickened. He said that very little could be done for the morbid condition beyond making life supportable for the patient, as perfectly curing it appeared to be out of the question.

In 1868, Hebra had a patient in his clinic with great thickening of the upper lip—presumably syphilitic—for which he was treated with mercurial plasters, and other anti-syphilitic drugs, for three months without any apparent improvement; on the contrary, thickening increased and extended its area over the alæ of the nose and face. Failing in this line of treatment, an anti-sclerotic method was adopted, with no better result. Kaposi affirms that he never believed the case to be one of syphilis, but, not knowing of any other disease he could associate it with, proposed to excise a small portion of the growth for microscopic examination.

The histological and clinical investigation revealed a new growth, which could not be identified with any

other neoplasm at the time, although it had some close connection on analogy with scirrhus in having a hard consistence, which then received the name of “rhinoscleroma.”

Not long after this case, a Russian lady fell under my own observation with the upper lip and nose greatly thickened and enlarged. This woman had wandered from one doctor to another, visiting university towns with the hope of getting some relief; but her case seemed to grow worse. The nose, when caught between the fingers, gave the feeling of holding two ivory plates, so firm and resisting were the infiltrated alæ. The organ was greatly enlarged in width, with the nares very narrow. It was noted that the change was chronic, and that the infiltration commenced in mucous membrane extending into the deeper tissue, constantly narrowing the lumen until the atresia was complete.

The external surface of the morbid part may even retain its normal condition, or assume a smooth, glazed appearance, void of all hair follicles, and more resembling a hypertrophic scar; at other times the surface of the part may have a brownish-red color, produced by a number of struggling vessels in the cutaneous area endeavoring to maintain the circulation, and giving a keloid or chancre-sclerotic appearance. Closer observation further showed that this infiltrated tissue had not an ulcerative origin, and no substance had been lost. The hard mass had also a peculiarity that, when endeavoring to cut it with a knife, notwithstanding the ivory or marble hardness, it offered little resistance to the knife, cutting like Emmenthaler cheese; moreover, when the section cut was taken out, the surface of the section remained perfectly smooth and uncontracted, differing in this from other growths where the elasticity of the part causes a contraction after section has been made. In malignant growths, such as sarcoma, carcinoma, ulceration, or necrosis may be found, but in this disease a serous fluid is poured out, which in time raises the surface to unusually large dimensions. In the section scarcely any blood is to be found, and no pain on puncturing the part. In cases more recently observed, the morbid change is not confined to the nasal organ alone, but may extend over the lips and advance to the pharynx. Billroth reports a case where it affected the under lip, the whole surrounding of the mouth narrowing the whole entrance to such an extent that the patient had to be fed with a quill. He performed an operation for the relief of the sufferer by removing a large part of the indurated infiltration; but, after a few months, the channel was as narrow as before the operation.

The morbid pathology still remains in obscurity. In some of the post-mortems of these patients, tumors have been found in the parietal region of the brain or attached to the calvarium, and some of these having fine cellular infiltrations resembling a sarcoma. Billroth and others believed that the growth had an inflammatory origin, which they considered the round cell testified, but it was discovered later that these round cells, in the course of time, were converted into fibrous tissue, or were reabsorbed, and disappeared. Kaposi believed that the process was not an inflammatory one, but depending more on the nutrition of the tissues. This he considered was supported by the gradual invasion of the parts, although he admits that the presence of the round cells favors the belief of a close approximation to sarcoma, but it is quite distinct from it in its malignity.—*Med. Press and Circular.*

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THE NEW MEDICO-CHIRURGICAL HOSPITAL.

IN a few weeks, the new Medico-Chirurgical Hospital will open its doors.

If we look back five years in the history of this institution, and compare its present quarters with those of the past, we are filled with admiration for the noble women and men by whose untiring energy and philanthropy this monument now stands complete, and stretching its arms, asking a vaster scope of usefulness.

The new building occupies an area of 64 feet front by 134 feet deep; is six stories high, and finished in the most approved style. Its hygienic appurtenances are of the very best. Its front is of magnificent proportions, with an imposing aspect. It consists of brownstone and enough brick to enhance its artistic appearance.

The hospital contains 165 beds, the fifth floor being reserved exclusively for private patients.

When it is remembered that nearly 11,000 patients were treated in the hospital proper, and the dispensary service during the past year, its friends will surely say, *Well done!* to such an institution, whose rule is never to refuse a free patient as long as there is a vacant bed.

Thus a new era dawns upon a noble institution, which, in so short a time, has reached the enviable position it now occupies in this community. That its great success, may ever be *crescendo* is the sincere wish of all those engaged in the humane cause of learning and charity.

Ad multos annos!

H. M.

RECITATIONS vs. LECTURES.

CATALOGUES of medical colleges usually have half a page or more devoted to an enumeration of "text-books." A list of text-books will also be found in the catalogues of various classical and other institutions of learning. In the latter case, we under-

stand that these mentioned works are actually used in the institution, and that the student will be required to have them and to study them. With regard to medical colleges, however, the writer has never yet fully understood what their list of text-books really means.

The usual acceptance of the word "text-book" is a book that contains the principles of some branch of learning, the book intended to be adopted by some institution teaching this branch of learning, and to be systematically gone through by a methodical course of lesson-prescribing and recitation-hearing. But so far as the text-books mentioned in the medical catalogues are concerned, the student may have all or one or none of them. Nobody knows whether he has them or not, nor is he ever asked a question that presupposes a study of any of these particular works. Instead of enumerating three Anatomies, four Physiologies, five Histologies, and so on, would it not be better for the student if the faculty were to decide on one good work in each department of study, require the student to have the book, and make sure that he studies it? Would it not be well, in fact, to teach medicine as other branches of knowledge are taught? If, in the long course of years, the recitation method has been found the best way of teaching Greek, Latin, German, mathematics, physics, and political economy, why should it not also be the best way of teaching anatomy, physiology, surgery, and practice of medicine? Some one says: "Yes, but medicine is not a fixed science. No one teacher fully coincides with the methods advocated by another." So far as that is concerned, do all teachers coincide in the rendering of a difficult Greek or Latin sentence? Is it necessary for the teacher of mathematics always to solve problems in the way the book directs? Is the instructor in political economy prohibited from expressing views at variance with those of the text-books he uses? or of making inferences different from those of the author?

If all professors were teachers, the lecture system would probably be satisfactory enough; but as the proportion is just about one to ten, it can be seen that somebody has to suffer. That somebody is the student. The vast majority of didactic lectures are simply time-wasters, and the sooner they are done away with, the better for the student. Here and there is a brilliant and efficient teacher-lecturer, but they are so rare that the student as a class would be much better off were the didactic lecture system abolished.

If the professor has ability as a lecturer and teacher, the clinics afford him ample opportunity to demonstrate his ability; and if he has no ability, the student at least suffers less from but one clinical lecture a week than from one clinical and three didactic abortions within the same period. As it is, most of the student's knowledge is gained either at the clinics, through quizzes, or by his own reading. And here the element of time comes in. After trying, during from three to six hours of didactic lectures, to follow the words of men who know not how to speak, the student goes to his room in the evening—his only time—too exhausted mentally to accomplish any satisfactory work. The result of this is, that before

examinations he fills himself full from quiz compends, and graduates without having read through, perhaps, a single standard work on any of the fundamental or special branches. In our better colleges, the graduation requirements of the medical student are now so numerous and exacting that every effort should be made towards economizing his time and facilitating the actual labor of acquiring knowledge. And if the recitation method is the best way of teaching a branch of learning, and the easiest way of gaining a knowledge of it, why not give the medical student the advantage of this method? Instead of three, let the college mention one book on anatomy—say Gray's—and then require every student to have a copy. Let the professor of anatomy prescribe for his class a certain number of pages as a lesson, and hear a recitation on this, just as any other teacher does. He would thus be sure that the anatomical library of some of his students does not consist merely of a "Vest-Pocket Anatomist" for use in dissecting, and a quiz compend against examination time, but would know for a certainty that they are systematically studying a standard work on this important branch. Should the class be too large for one teacher to handle, it could be divided into sections, as at our larger classical institutions. The needs of the student are illustrated by the growth of the quiz system, a system by which the student who can afford the expense, after having paid the professor for his lectures, gives the quiz-master an additional reward for teaching what the professor has talked about. Two hours are thus consumed where one should have been sufficient.

Just as the graded course is slowly replacing the absurd old system of huddling students of all classes in one room, and hurling at their devoted heads, for two or three successive years, the same lectures, so we believe that the recitation will ultimately replace the didactic lecture, and will do this to the great increase not only of the student's physical comfort, but also of his positive knowledge at the end of his studenthood.

E. B. S.

Annotations.

LOUISVILLE.

COMING here from Cincinnati, by all means take the steamer. The trip down the Ohio is delightful. As the steamer leaves Cincinnati at 5 P. M. and arrives here at 6 A. M. (barring fogs), no time is lost, while the passage, including berth and meals, costs a dollar less than the railroads charge for fare alone. The Fleetwood had clean beds; no vermin; very good music, and good service.

After Cincinnati, Louisville is clean. There is more bustle and activity in the streets here. There are four medical colleges here, with 1,500 students, more they claim than in any other American city, except in New York. But, alas! the colleges are, with one exception, built on the two-year plan, and the only three-year school has a class of about 130, after seventeen years' existence. But the short term is not the only reason for Louisville's prominence as a center of medical teaching, for she has always

numbered men of the largest caliber among her physicians. The memory of the great surgeon who left Louisville to make Jefferson College illustrious is still cherished here, and in this city also his work still lives in that of his old pupils. The colleges here claim to have facilities for teaching that are not excelled in any of the Eastern schools. Great attention is paid to laboratory work, and each student is required to attend the quizzes. Dr. H. Goodman, of the University, has just completed an exhaustive study of the remarkable poisoning case in which sixty-three persons suffered. The report will shortly appear in one of the Louisville medical journals. After considering the various theories, Dr. Goodman proves conclusively that the cases were due to the ingestion of septic matter.

Lovers of "Progress" regret that Dudley Reynolds has retired from medical journalism. His patients having established the priority of their claim upon his time.

Dr. John Goodman has been seriously ill, but is now somewhat better.

The health of Louisville appears to be somewhat worse than usual this summer, there having been an unusual prevalence of typhoid fever and of intestinal troubles.

Although not equal in population to Cincinnati or Pittsburg, Louisville displays a degree of business enterprise far ahead of either. Several great drug houses have pushed their trade beyond the city, even into the great Eastern cities. Mr. Scheffer, in a little place, in a little out-of-the-way corner, manufactures the pepsin with which his name has been associated for twenty years. He showed us a sample of saccharated pepsin in an open bottle prepared in 1872, as free from any unpleasant odor as the day it was made. Mr. Scheffer believes that large doses of pepsin are unnecessary, as the stomach takes up the work of digestion when it has been once commenced by the pepsin administered. He also insists on the necessity of diluting the food well when pepsin is given.

Messrs. Renz and Henry call attention to a very important point in connection with their elixir of the three chlorides. It is that certain drugs gain in therapeutic power when allied with other drugs having a similar action. Thus they have reduced the dose of mercury to $\frac{1}{128}$ gr., and of arsenic to $\frac{1}{256}$ gr. Some years ago the writer called attention to the fact that cascara and maltine exerted a much greater laxative effect together than either did separately. Quite recently the same observation was made in regard to the cardiac tonics, the combination of several giving better results than the increase in dose of either.

Although Louisville is celebrated for its whiskey, we have not in two days spent here noticed a single individual under the influence.

The albuminate of iron has not come up to expectations and is being withdrawn. W. F. W.

CONSUMPTION.

IN August, 1890, Dr. Koch read his address on Bacteriology before the tenth International Medical Congress. Dr. Koch spoke of his so-called discovery, and of the micro-organic causes of most of our diseases, as the originator of the theory.

More than fifty years ago, Raspail published, in his "Histoire de nos maladies et leurs remèdes," that among the causes of our maladies living, minute germs, parasites (bacteria, microbes, bacilli, micrococci, pores, or whatever you may call it now), were

the predominant destroyers of human life. That great chemist was hooted down, prosecuted and persecuted by the profession. This is not said to disparage the merits of Koch, but in justice to the man who, of all others, has opened the field to the important study of bacteriology.

Next comes Dr. Dixon, of Philadelphia, an American savant, who published the lymph and tubercle bacilli theory long before Koch even said a word about the question. Our American investigator is of the opinion that in its present form the fluid is too dangerous to be used at all in the human subject.

To make his lymph, Koch tried, as he says, ethereal oil, tar pigments, mercurial vapor, salts of gold and silver, especially cyanide of gold, to destroy the germ of consumption. The late Dr. Ricord used to say in regard to gold: "It is an elegant preparation for the doctor to receipt from, but bad and very dangerous to give to his patients."

Professor Virchow made a report, recently, of twenty-one autopsies of dead consumptives, treated by lymph, and he declares that its injection increases the number of germs bacilli in the human body, forces them to emigrate to non-affected parts of the system, producing other diseases and endangering more rapidly the life of the patient.

Meanwhile two French physicians, Bertin and Picher, of Nantes, tried the transfusion of goat's blood in consumptive patients, on the theory that goats are exempt from the fearful disease. Their report of success has created quite a sensation at the Academy of Medicine, who took hold of the subject for further investigation, with hope, and certainly without danger.

I have no faith in the curative power of the injection of the lymph. It may be of service for the more certain diagnosis of tuberculosis of the different parts of the body; but it requires so much care, it must be prepared so skillfully, and its dangers are so great, if the least mistake is made, that I prefer to agree with Dr. Dixon.

The main principle is to drive out the voracious tenants, who crawl in the cells of the lungs, feast on the tissues of those organs, eat up the vital power of the blood, and, when they have multiplied, so that they remain masters of these cells, their nefarious work is done—our physical life is gone.

To accomplish that cleaning out, bring into the body recuperative tonic elements, good germ-destroyers, which will heal and make a purer and stronger blood, and health will be restored.

The millions of pores of our skin and the colon are the means of exit, to clean the dead bacilli, their slimy booty and the effete matter out. Hence the germicide medication.

To be more particular, have a generous diet, all kind of vegetables (except potatoes) and fruit; Graham or corn bread; fresh cream and pure wine, as native Burgundy or claret at every meal; soup once a day at least; roast veal or mutton venison, all well spiced, no pastry, no pork, no tea, and very little coffee.

The two best germ killers I found were camphor and tar. Should you succeed in permeating the system, the blood, the lungs, the glands, the muscles, in fact, every portion of the body with tar and camphor, the bacillus must go and leave you free from the disease.

I use the camphor in cigarettes, to inhale constantly, take a five-grain capsule three times a day, swallowing it with a cupful of tar-water. At night, dust between the sheets of the bed with the powder; sleep on pillows made of hops well powdered with camphor; renew the camphor every week.

Instead of coffee or tea, make an infusion of borage, burdock squills, or sarsaparila, with a teaspoonful of iron preparation in a cupful three times a day, at meal time; ventilate your room so as to have pure air day and night; clean the spittoon at least three times a day. Avoid severe colds.

Wash the body twice a day with the Raspail sedative water, massage-like, followed by a vigorous rubbing with camphor ointment, and clean the colon every evening with an injection of a quart or more of tar water.

Lately I have added to the above treatment one morrhua and creasote capsule an hour after meals and one antiseptic poultice on the chest in retiring for the night; change the bed-sheet and undergarments very often, and wash them immediately in boiling water.

By absorption, the camphor and tar will be carried through all the tissues and circulations; and in the course of time will drive the bacilli and consumption from the body.

With cheerful surroundings and determination to conquer, you may anticipate a cure though half of the lung would be disorganized.

The first case I treated in a similar way, was Joseph, a nephew of Moses Chartier, of St. Anne, Illinois, twenty-seven years ago. He was spitting green and had all the symptoms of the last stage of consumption. In less than three months he was up; a year after he married, and is still in good health. Many others have been rescued from that scourge by analogous treatments, and I think such antiseptics used in similar manner in infectious or contagious diseases would prove as curative and beneficial, as for lung diseases.

The Secretary of the German Government for medical instruction in the last monthly meeting of the Prussian Herrenhaus says in conclusion: "Professor Koch is in hope to finish his work in a few weeks, and will present his discovery to the profession. I hope that such will be the case, but to positively claim its therapeutic value, I cannot do."

D.

HALLOCK, MINN.

The Medical Digest.

CHANCROIDS AND ULCERATIONS.—

R.—Aristol,..... 3j.
Tarro-Petrolene (Petr. Comp. No. 1) 3ij.
Ft. ung.
Sig. Apply twice daily.

—*The Bact. World.*

ALCOHOL IN ERYSIPELAS.—Dr. Stembarth has treated successfully a number of cases of erysipelas by the external application of alcohol. He paints the affected part and the healthy skin surrounding it every two hours with absolute alcohol, and claims to effect a cure in most cases within three or four days.

—*Hospital Gazette.*

PIGMENTATIONS OF PREGNANCY.—The *Journal de Medecine de Paris*, recommends that the following ointment be rubbed into the affected parts, twice daily, to remove the pigmentations which so often disfigure pregnant women:

R.—Cocoa butter,
Castor oilāā 3ij ¼
Oxide of zinc gr. v.
Yellow oxide of mercury..... gr. ij.
Essence of rose, enough to perfume.

SUNFLOWER is recommended as an efficient remedy for asthma. The drug is given in whiskey with iodide of potassium.—*Waugh.*

LELOIR claims excellent results in the abortive treatment of herpes from the local use of 1 part of resorcin or menthol to 50 of alcohol. If there is much pain he uses gauze steeped in the following solution and covered with an impermeable dressing: Alcohol, 100 parts; cocaine hydrochlorate, 1 part; extract of cannabis Indica, 10 parts; mint essence, 10 parts.

—*Medical Standard.*

BANANAS IN CHRONIC BRONCHITIS.—In cases of chronic bronchitis with difficult breathing and scanty expectoration the use of banana-juice has been highly praised. The juice is prepared by cutting up the bananas in small pieces and putting them, with plenty of sugar, in a closed glass jar. The latter is then placed in cold water, which is gradually made to boil. When the boiling point is reached the process is complete. Of the syrup so made a teaspoonful every hour is the proper dose.

—*New York Medical Record.*

QUICK ACTION OF DRUGS.—If you want a sure, speedy action from your drugs, as if you gave them hypodermically, administer them in hot water; one-half the dose will have the effect. The reason is obvious. If the dose be given in hot water it is quickly absorbed, and the force of the drug thrown upon the system at once. Few people realize how long the dose will remain in the stomach if that viscus be chilled. Beaumont found that a glass of ice-water stopped digestion for one hour. This method of administration is particularly suitable for the vegetable preparations, opiates, etc.

—*Medical World.*

JULUS CHÉRON writes: "Pelvic pain, in cases of metritis, salpingo-ovariitis, pelvic cellulitis, or pelvic peritonitis, are particularly severe in those of rheumatic diathesis. We even meet with women who, after menopause, suffer the pains, which accompany uterine diseases, who complain of acute suffering in the lumbosacral and abdominal regions, and who have merely, from taking cold, an attack of lumbosacral neuralgia, without any lesion of the genital organs. In questioning these patients we may easily assure ourselves that a rheumatic taint is present. Salicin is, in such cases, a remedy of service, and I have often found it superior as an analgesic to those generally employed in acute or chronic pelvic cellulitis. I usually administer 1 gramme (15½ grains) daily, divided into three doses."

—*Kansas City Medical Index.*

VINAY (*Lyon Medical*) has recommended the employment of aristol in the treatment of fissured nipples occurring during lactation. He uses it in cases where there is much ulceration and pain. The mixture is as follows:

R.—Aristol..... 3j.
Liq. vaselin..... 3v.

This is to be applied to the breast and carefully wiped off before the child nurses. After its employment the pain diminishes and cicatrization goes on rapidly. In cases in which the glands become much involved this preparation of aristol may be rubbed into the enlargement with advantage.

—*Archives of Gynecology.*

DENTISTRY AND SYPHILIS.—At a recent meeting of the New York Odontological Society, Dr. L. D. Bulkley discussed the subject of syphilis in its relation to dentistry, and gave it as a result of his observations that there are four sources whence infection may be conveyed in this association, viz., the initial sore, mucous patches, syphilitic ulcerations, and the blood. The chief source of danger in dental operations is the mucous sore, the sufferers being patients infected by instruments used in second cases without being sufficiently carefully cleansed, and dentists who receive the poison direct from the syphilitic subject. The remedy proposed is to boil all instruments used in dental operations in strong carbolic acid solution, and to disinfect with the same or a trustworthy substitute, the napkins, floss rubber, plaster, etc., employed in the various proceedings of dentistry.

—*Provincial Med. Jour.*

ANOTHER DEATH FROM CHLOROFORM.—We regret to have to report another death from chloroform, which recently took place at the Middlesex Hospital. The deceased, a man aged thirty-three years, went to the hospital, accompanied by his wife, to have an abscess of the neck opened. The wife states that she was not told that chloroform was to be administered or she should have objected, knowing that her husband had a weak heart and was subject to fits. These frequent deaths from chloroform call for some official inquiry, and we would suggest that the Royal College of Physicians appoint a Committee of Inquiry to investigate this subject. Our strong impression is, that chloroform is very often given by administrators who are inexperienced, and that anæsthetics are often given for the most trivial operations not calling for their use.

—*Hospital Gazette.*

DENTAL ASEPSIS.—There is reason to suspect that Listerian dogmas have not yet permeated the dental department of surgery, and that there is room for improvement in relation to the antiseptics of the instruments employed in the dental art. We do not go so far as to advocate the extraction of teeth under the carbolic spray, but there are undoubtedly some very tangible risks involved by negligence in this respect, foremost among which is the possibility of transmitting syphilis and blood-poisoning. The mouth is itself the perfect model of an incubator for the spores of bacteria, fulfilling all the requirements as to heat and moisture, besides providing suitable media for their development. The dentist therefore cannot be too scrupulously careful in providing for the freedom of his hands and of his instrument from "misplaced matter," *alias* dirt. Nothing is more likely to secure for him the confidence and esteem of patients than an ostentatious observance of the laws of surgical cleanliness. For this reason we are disposed to advise the methodical use of antiseptics. Not, indeed, that they are essential to cleanliness, but because the antiseptic method, when conscientiously carried out, ensures that purity which is indispensable for perfect safety. The best agent for the sterilization of instruments is probably boiling water, which probably places any marauding microbes *hors de combat*. It has the premier advantage of being easy of application and of not damaging the steel. "Antiseptic dentistry" would make a good war-cry, but unless all dentists practice this they will have fallen short of their mission.

—*Med. Press and Circular.*

TREATMENT OF "RED NOSE."—According to Unna, one-fifth of the cases are due to acne rosacea with vascular dilatation. Very often it stands in direct relation to seborrhœa of the hairy skin. This seborrhœa should be treated in the usual way. When acne rosacea is the cause, Unna gives fifty centigrams (seven and a half grains) of ichthyol daily internally, and at the same time prescribes lotions of the same substance in watery solution externally. At night applications of the following paste are of benefit:

R.—Zinc pomade..... 20.0.
Rice powder..... 5.0.
Sulphur..... 2.0.

Unna advises multiple scarifications of the dilated veins after Hebra. This should be repeated two or three times a week. The minute wounds should be covered at once with moist absorbent cotton. In light cases, and as supplementary treatment, he advises repeated washings with ichthyol soap. Only warm water should be used.—*Am. Practitioner and News.*

IODOPHENIN: A NEW ANTISEPTIC.—A. Scholvin has found (*Pharm. Zeit.*) that when a cold-saturated solution of phenacetin, acidulated with hydrochloric acid, is treated with iodine, a gray precipitate forms which afterwards appears as a mass of crystalline needles. It forms, when dry, a chocolate-brown powder. When recrystallized from glacial acetic acid, it may be obtained in steel-blue crystals.

In preparing this substance on a large scale, it would be necessary to operate with very large quantities of liquid, if a mere aqueous solution of phenacetin were employed. This is avoided by dissolving the phenacetin in glacial acetic acid, and afterwards diluting with water.

The resulting product, called *iodophenin*, melts at 130° C., decomposing at the same time. It contains one portion of its iodine in a more intimate combination than the other. It is soluble in twenty parts of cold glacial acid, more easily in the same liquid when hot, and is also soluble in alcohol. It is but slightly soluble in benzol and chloroform, and insoluble in water. If heated with water, it is decomposed.

Witthowsky has found that this substance is a most efficient bactericide.—*Med. and Surg. Reporter.*

THERMOMETRY IN DIAGNOSTIC RELATION TO EAR DISEASE.—Every aurist must have remarked in the course of treatment of chronic suppuration of the middle-ear, that there are times when the auricle feels warmer than usual to the hand. I have noticed also that this increased warmth of the ear often corresponds with an increase of discomfort in the ear, and even with pain. It occurred to me to insert an ordinary registering thermometer in the external auditory canal, which revealed the fact that there was an increase of temperature on the affected side of from one-eighth to one degree. When I have found this the case I have used free douching with carbolated hot water, which, in my experience, always relieves subacute congestions and inflammations of the middle-ear whether the drum-membrane be perforated or not.

My observations have extended over the last two years, but have not been followed up very persistently or systematically. My attention was drawn anew to this subject by some remarks made at the Ontario Medical Association meeting, which was held recently in this city, by Dr. Birkett, of Montreal. He stated that Dr. Buller had been using surface thermometry to the mastoid with important results, which he will

no doubt publish in due time. In the meantime I invite the attention of the profession to this novel proceeding in the hope that it may lead to new indications in diagnosis of deep-seated ear disease.

—Ryerson, in *Med. Record.*

THE DRY METHOD OF TREATING WOUNDS.—Dr. Hal C. Wyman, of Detroit, calls attention to this valuable method of treating wounds. The treatment consists in drying the wound with hot, dry towels taken from an oven where they have been heated to 212° F. (100° C.). No water is allowed to touch the wound or the adjacent parts, from first dressing to final healing. Loose fragments are removed; all tissues bruised beyond repair are cut away with scissors; blood and dirt are scraped away with hot, dry towels. All lacerated parts are approximated and held with sutures which have been freshly sterilized by dry heat. Then a dry mixture of Wyeth's impalpable powder of boracic acid (seven parts) and iodoform (one part) is rubbed into the wounds along the line of approximation. Over this are laid strips of iodoform gauze. Over them oakum freshly sterilized cotton, held in a place by a roll of bandage fresh from the oven.

The dressings are allowed to remain undisturbed until healed, unless pain, rise of temperature, or soiling of the dressing by discharges indicates that fresh dressings are needed. This method, he claims, favors the cleaning of the wound, favors the control of hemorrhage, diminishes the tendency to fermentation and putrefaction, hastens to repair the wounds, and insures the healing of flaps and ragged pieces which by the wet method would slough.

—*Canada Medical Record.*

FUCHSINE IN DISEASES OF THE THROAT.—Dr. Karl G. Bogroff, of Odessa (*Vratch*), points out (on the ground of his own observations since 1888) that:

1. Fuchsine, like all other aniline dyes, is easily absorbed by the laryngeal and faucial mucous membrane.

2. Antiseptic fluids when mixed with fuchsine penetrate into the tissues far more deeply and act much more effectively, than when employed alone.

3. When injected into the larynx "the superficial cellular elements and inter-cellular spaces become infiltrated with particles of the aniline dye, and thus a thin protective film is formed, which is impermeable not only by any irritating fluids, but even by gaseous bodies."

4. In cases of reactive laryngeal inflammation arising in phthisical patients from constant irritation by the pulmonary discharge, the intra-laryngeal injection of a 2 per cent. watery solution of boracic acid saturated with fuchsine rapidly removes the inflammatory phenomena and relieves difficulty in swallowing, etc.

5. Fuchsine proves similarly beneficial in cases of "faucial mycosis."

The author cites the case of a medical man suffering from that affection in whom local irrigations with a 1 per 1,000 corrosive sublimate solution mixed with the dye quickly brought about a complete cure, after energetic antiseptic treatment by the ordinary methods had utterly failed. Dr. Bogroff believes, further, that in intra-laryngeal medication the admixture of fuchsine with other medicaments may also be found useful as a means of determining whether "the drugs reach their precise destination, and whether they do so in sufficient quantities."

—*Brit. Med. Jour.*

SYMMETRICAL GANGRENE FOLLOWING INFLUENZA.—Dr. Hugh Highet records the following case :

A girl aged twenty, one week after the commencement of a mild attack of influenza, was climbing a steep hill, when she experienced a severe pain in the calf of each leg—so severe that she was unable to walk further, and had to be carried home. She remained in bed three days, and was scarcely on her feet again when once more pain suddenly arose in the right leg from the front of the knee to the toes. There was a sense of stiffness and numbness, and soon the foot began to feel cold. By the following day the foot was swollen and stiff, and blue discoloration appeared on the instep, spreading to the dorsum. On the succeeding day the left foot began to show similar signs. Three weeks later she was admitted into the British Hertford Hospital, Paris, with dry gangrene of some of the toes of the right foot and of the tip of one of those of the left foot. Her general condition was satisfactory. There was a soft systolic murmur over the heart, best heard towards the left base. Dr. Highet surmises that owing to the weakened condition of the myocardium during the influenza, and probably also to an altered state of the endocardium, conditions favorable to the formation of thrombi in the heart were present, and that a portion of one of the clots was dislodged during the exertion in climbing, and subsequently other and larger emboli were separated. The patient made a good recovery.—*Brit. Med. Jour.*

INGUINAL COLOTOMY.—In the *Centralblatt für Chirurgie*, Dr. Landow, of Göttingen, describes an abnormal condition of the sigmoid flexure, which is regarded as one of practical interest, as the possibility of its occurrence in any case of inguinal colotomy would contra-indicate the practice advocated by Madelung of stitching up the lower opening after complete division of the gut, and allowing the lower and detached segment to fall into the pelvis. In two cases of inguinal colotomy recently observed in the Göttingen clinic, where the usual practice is to divide the gut and to stitch the two open ends to the external wound, it was noticed that the discharge of faecal matter always took place from the lower and not from the upper opening, although at the time of the operation the lower portion of the gut was traced downward towards the bladder and the upper portion in the reverse direction. In one of these cases, which terminated fatally, it was found at the necropsy that the sigmoid flexure, which was very long and freely movable, passed upward and outward as far as the splenic flexure of the cæcum, and then curved downward and towards the middle line, reaching the rectum after a long and tortuous course. The division of the gut having been made in the ascending portion, what was supposed to have been the distal opening was that nearest the cæcum, whilst the supposed upper opening corresponded with the divided end of the inferior segment of the elongated and contorted sigmoid flexure.

—*British Med. Jour.*

GETTING EVEN WITH A TAPE WORM.—A butcher boy treated by mercurial inunctions, having passed two solices per anum, was treated with male fern, which caused the evacuation of two tæniae, whose gray coloration caused the presence of mercury to be suspected. Chemical analysis having demonstrated that such was really the case, microscopical examination gave the following result: Treated with glycerine, each proglottis showed the metallic deposit in

the vas deferens, in some of the vasa efferentia, and in the vesiculæ seminales. It was so pronounced in the oviduct that even to the naked eye it presented the appearance of a dark streak. The vagina looked like a dark tube, although on section the narrowed caliber was still found to exist. The walls of the uterus also contained a certain quantity, while the ovary itself was quite free. After staining by means of eosine and other coloring matters, longitudinal and transverse sections revealed the fact that the entire parenchyma of the tænia contained particles of mercury equally distributed. On the integument these were collected principally in the grooves or depressions, which was particularly the case in the neighborhood of the suckers; to the naked eye the head of the worm seemed blackish. The remarkable part of this observation is the enormous amount of mercury absorbed by these parasites without having any appreciable influence on their vitality; with the exception of the gray coloration, microscopical examination did not reveal any difference from the parasites found in healthy animals.

—*New England Medical Monthly.*

ON TAKING FLUID WITH MEALS.—A great deal of misapprehension is often found to exist in the popular mind in regard to matters of eating and drinking; the cause of this to some extent is to be traced to old-time sayings, which have come down to us in the form of a concentrated infusion of somebody's opinion upon a subject of which he or she was woefully ignorant. One of these misapprehensions to which we may refer is as to the injuriousness of taking fluid with meals. One frequently hears it laid down as a maxim that "it is bad to drink with your meals, it dilutes the gastric juice." By way of explanation we may remark that "it implies that the fluid taken is harmful." Whence this sagacious postulate originally came we cannot tell; it has quite the ring about it of an inconsequent deduction formed by a person whose presumption of knowledge was only exceeded by a lamentable ignorance of the subject. Medical men often find much difficulty in dealing with these museum specimens of antiquated science, for even educated persons are disposed to cling to the absurdities of their youth. Upon this matter Mr. Hutchinson remarks in the last number of his "Archives: " "I observe with pleasure that the verdict of general experience and common sense has been confirmed by scientific experiment in the matter of taking fluid with meals. Dr. Tev. O. Stratievsky, of St. Petersburg, after elaborate trials, has found that fluids materially assist the assimilation of proteids, and announces the following conclusion, which is to be hoped no future experiments will controvert—on the whole, the widely-spread custom of taking fluids during or just before one's meals, proves to be rational and fully justified on strict scientific grounds. 'To take fluids with the meals is almost as important an adjunct to digestion as is the mastication of solid food preparatory to swallowing it.' It is obvious, however, that there is a limit to the amount of fluid one can swallow with impunity—not to speak of comfort—just as much with meals as at other times. It would be dangerous to create a general impression that fluid is good with food irrespective of quantity. It is, moreover, a well-ascertained clinical fact that an excess of cumprandial fluid does retard digestion in certain people, and gives rise to discomfort in most. A little attention to one's sensations in such matters will far better fix the desirable limit than all the "data" in the world.—*Medical Press and Circular.*

Medical News and Miscellany.

DOCTOR AND PREACHER.

Parson and doctor joined in one
Most suitably we find;
The one the suffering body treats,
The other soothes the mind.
The parson shows the way to heaven;
And then, with tender care,
The doctor consummates the work,
And gets the patient there.

—*Medical Age.*

DR. F. HURST MAIER sailed for Europe on the 6th, to continue his studies abroad.

HEADACHE almost always yields to the simultaneous application of hot water to the feet and back of the neck.

DR. WM. F. WAUGH is on his vacation out West. We hope that the trip will be a pleasant one, and that the doctor will return in the best of health.

THE Alvarenga Prize for 1891, of the College of Physicians of Philadelphia, has been awarded to Dr. L. Duncan Bulkley, of New York, for his essay on Syphilis Insontium.

DR. CONCEPCION ALEXANDRE has recently been appointed upon the staff of the Hospital de la Princesa in Madrid. This is said to be the first appointment of a woman to any official position in Spain.

If you want knowledge you must toil for it; and if pleasure you must toil for it. Toil is the law! Pleasure comes by toil, and not by self-indulgence and indolence. When one gets to love his work his life is a happy one.—*Ruskin.*

TELEGRAMS from Cairo report that cholera is greatly on the increase, both in the Hedjaz and Syria, and the mortality is very high. Telegrams from Constantinople announce that cholera is increasing in Aleppo. On August 5 there were sixty-five deaths from cholera reported there.

THE HYGIENE OF INFANTS.—A prize of one thousand francs (\$200) is offered by the French Academy of Medicine for the best essay on the Prophylaxis of Syphilis During Lactation. These in competition must be in the hands of the Academy before the 1st of March, 1892.

"NEW ENGLAND MEDICAL MONTHLY."—We have before us a souvenir copy of the *New England Medical Monthly*, issued to celebrate its tenth anniversary. Its artistic appearance enhances greatly the value of this excellent Monthly. It presents, in this issue, excellent photographs of the best known physicians and surgeons in this and other countries. We wish this journal great success in the future—success which it so well deserves.—*Ed.*

HYPNOTISM EXTRAORDINARY.—"A curious case, according to a daily paper, has been disposed of in the Glatz criminal court in Germany. A chemical engineer named Sandmann, of the Munsterberg sugar refinery, has been fined 450 marks for causing bodily harm to a girl, named Emily Winter, by hypnotizing her for a whole week. Sandmann hypnotized the girl daily, sometimes even three times a day, until at last she became violently mad, and in her paroxysms tore the flesh from her fingers. She is now an inmate of a mad-house."

—*British and Colonial Druggist.*

PUNISHED FOR BETRAYING A PROFESSIONAL SECRET.—A prominent gynecologist in Germany was recently found liable for \$1,600 damages, besides being condemned to pay a fine of \$100, for having published clinical notes of some of his cases in a gynecological treatise. His fault consisted in publishing the names of his patients in conjunction with the clinical accounts of their cases.—*Med. Record.*

THE First Annual Meeting of the American Electro-Therapeutic Association will be held September 24, 25, and 26, 1891, in the hall of the College of Physicians, corner Thirteenth and Locust streets, Philadelphia, Pa. President, G. Betton Massey, M.D.; Vice-Presidents, Wm. James Morton, M.D. and A. H. Goelet, M.D.; Secretary, Wm. H. Walling, M.D.; Treasurer, Geo. H. Rohé, M.D.

INTER-CONTINENTAL AMERICAN MEDICAL CONGRESS.—At a special meeting of the Susquehanna Co. (Pa.) Medical Society, held August 4, 1891, Dr. W. L. Richardson, of Montrose, Pa., member of the Auxiliary Committee of the Congress for Susquehanna Co., introduced resolutions approving of the Congress, and pledging his society to do all in its power to promote interest in the meeting. The resolutions were unanimously adopted.

MULTIPLE PREGNANCY.—Dr. Vassali ("La Spérimentale" reports a case of a woman who in the fourth month reached a size equal to that of term. She was taken with pains, and in the course of six hours delivered of six fœti whose combined weight was 1,730 grams, the largest weighing 305, and the smallest 250 grams. Their length varied from 22 to 26 centimeters. The single placenta was large, adherent, and removed piecemeal. A case of octuple pregnancy terminating at the same period was reported in "La France Medicale" of 1880. These multiple pregnancies are reversions to lower types since, as the researches of De Monteyel and others have shown, multiple pregnancies are most frequent among the degenerate classes.—*Med. Standard.*

THE MARKINGS ON THE FINGER TIPS.—Dr. D'Abundo has published the results of some researches on the markings on the tips of the fingers. He examined the fingers of seven idiots, and found that the markings on the tips of all the fingers on each hand were identical, thus showing a marked difference between those of idiots and of sane people. The thumb tips of one idiot had the same markings as those on his fingers. There was a noticeable smoothness of the finger tips in all the idiots. In one case Dr. D'Abundo remarked a perfect resemblance between the markings on the fingers of an idiot and on those of his mother. Out of twenty cases of imbecility Dr. D'Abundo found in four only one sort of tracing on all the fingers; in the rest there was a tendency to repetition on almost all the fingers. In hemiplegia, when the lesion was of old standing, he noticed in the part affected a distinct smoothness of the finger tips, which prevented him from obtaining a clear-cut impression. From a medico legal point of view, these researches may ultimately have an important bearing on crimes of a sanguinary nature. For instance, if drawings were taken of the impression of a hand bathed in blood the markings would be most clear, more especially if the criminal had not merely laid his hand on any papers, but had actually fingered them. The evidence of crime would be still more valuable if the criminal had some cicatrix or deformity on the fingers.—*Lancet.*

WEEKLY Report of Interments in Philadelphia, from August 22 to August 29, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess.....			1	Fever, remittent.....		1	1
Anæmia.....	1			" scarlet.....		2	2
Aneurism of the aorta.....	1			" typhoid.....		2	2
Alcoholism.....	2			Gangrene.....		2	
Apoplexy.....	4			Hæmorrhage.....		2	
Bright's disease.....	7	1		Inanition.....		10	
Burns and scalds.....	2	2		Inflammation bladder.....		2	
Cancer.....	9			" brain.....		7	
Caries of spine.....	1			" bronchi.....		3	
Casualties.....	6	1		" kidneys.....		2	
Congestion of the brain.....	2	4		" liver.....		1	
" lungs.....		1		" lungs.....		7	6
" liver.....		1		" pericardium.....		1	1
Cholera infantum.....		41		" peritoneum.....		5	1
Cholera morbus.....		3	2	" s. & bowels.....		6	6
Collapse of lungs.....		1		" knee joint.....		1	
Consumption of the lungs.....	33	2		Marasmus.....		48	
" bowels.....				Obstruction of the bowels.....		3	
Convulsions.....	2	21		Old age.....		8	
" puerperal.....		1		Purpura hæmorrhagica.....		1	
Croup.....		3		Paralysis.....		2	
Cyanosis.....		11		Poisoning.....			
Debility.....	3	6		Pyæmia.....		1	
Diabetes.....		1		Rheumatism.....			
Diarrhœa.....	1	1		Septicæmia.....		2	
Diphtheria.....		4		Suicide.....		6	1
Disease of the heart.....	17	3		Syphilis.....		1	
" liver.....		1		Teething.....		1	
Drowned.....		1	2	Tumor.....		1	1
Dropsy.....		1		Uremia.....		1	
Dysentery.....	4	3		Whooping cough.....		2	
Epilepsy.....		1		Total.....		166	211
Fatty degeneration of the heart.....		2					
Fever, malarial.....		1					

NEW YORK CITY SUPREME COURT DECISION.—By a decision of the New York City Supreme Court, it seems that a medical student cannot be debarred, without cause, from an examination for his degrees. It was in the case of Thomas Cecil against the Bellevue Hospital Medical College, whose faculty, without assigning any reason, informed him that he would not be allowed to attend the examination. The college authorities claimed the right, arbitrarily, to debar him; the court denied them that power. It may be the faculty had some occult reasons for their course. Perhaps they had ideas, without facility of expression. Or perhaps, like Falstaff, they would not give "reasons on compulsion." At all events, they should compromise with Cecil, now that he has come out ahead.—*Weekly Medical Review*.

A CORRESPONDENT of the *Medical Age* says: "I have endeavored to keep track of 100 of my medical friends after graduation, especially of what they did during the first five years, and find nearly 75 per cent. had to resort to other employment to make a living. Twenty-three received a salary either in addition to practice or separate therefrom. Fifteen were proprietors of drug stores. Three were insurance agents. Four loaned money. One sold real estate. Three were connected with medical journals. One was an agent for drugs. One for books. One preached. One was in the patent medicine business. Two were farmers. One a manufacturer. Two gave massage treatment. One sawed wood, and subsequently suicided. Twelve gave up in disgust, and one never tried practice at all. Twenty nine graduates only in one hundred exclusively devoted themselves to medicine, and of these eleven associated themselves with other practitioners, and in many cases fell heir to their practice."

—*Weekly Medical Review*, August 8, 1891.

THE VALUE OF VACCINATION.—In India where Brahmanical prejudice has ever stood in the way of sanitary progress, the mortality from small pox has, until recent years, been appalling. Repeated at-

tempts to introduce vaccination met with violent opposition from high-cast Hindoos, some of whom, however, allowed their daughters to be vaccinated just for experiment, girls being, according to their ideas, of not much value. As a result of this policy the girls escaped both death and disfiguration, while the boys were carried off by the thousands, seeing which the Brahmans relented and vaccination is gradually gaining favor, having been made compulsory in Calcutta in 1880, and in Madras in 1884, other cities and districts having fallen into line. The number of deaths from small-pox in Madras during the six years immediately preceding the enactment of compulsory vaccination, from 1879 to 1884 inclusive, was 9,809, a yearly average of 1,634.8, while during the six years following, from 1885 to 1890, there were only 190 deaths, or on an average 35 a year. In the unprotected period the smallest number of deaths (355) occurred in 1882, and the greatest (4,064) in 1884. In 1885, the death-rate fell to 26, and in 1886 there was *only one* death from small-pox. Since then there has been again a steady rise, owing, perhaps, to laxness in enforcing the law, the deaths in 1887 numbering 13; in 1888, 36; in 1889, 45, and in 1890, 69. Surely these figures ought to convert the most rabid antivaccinist.—*Pacific Med. Journal*.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending August 22, 1891.

DUBOSE, W. R., Passed Assistant-Surgeon. Ordered to duty at Naval Academy, Annapolis.

HARMON, G. E. H., Surgeon. Detached from Naval Academy, Annapolis, and waits orders.

WELLS, HOWARD, Surgeon. Ordered for temporary duty at Naval Station, New London.

HOEHLING, A. A., Medical Inspector; PARKER, J. B., Surgeon, and NORTON, O. D., Passed Assistant-Surgeon. Ordered to Naval Academy, Annapolis, Sept. 3, to examine, physically, candidates for admission to the Naval Academy.

DR. N. M. GRAY, of Allegheny, Pa., says: I have tried Papine in two cases, and with the best effects. Both were cases of children from one to three years old, and both were so complicated with cerebral trouble, that I feared to use opium or any of its preparations, and yet I wished for an anodyne to control some very marked symptoms. So I tried the Papine, and am happy to say that it had the desired effect, without any of unpleasant consequences so often following the use of the drug in any form I have heretofore used. I think it an excellent preparation for that class of diseases, and intend to use it hereafter.

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The Times and Register.

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IRON; ITS CHEMISTRY, PHARMACOLOGY, PHYSIOLOGICAL AND THERAPEUTIC ACTION.

By WILLIAM H. WALLING, M.D.,
PHILADELPHIA.

RECENT PREPARATIONS OF IRON.

CHEMISTRY.—Iron is one of the most widely diffused substances in nature. It enters into combination with all the elements in two proportions, forming two varieties of salts, the *ferrous* and the *ferric*. Those salts in which the atom of iron appears to possess inferior affinity—that is, in which the other radicals are in less amount—are termed ferrous, the higher being ferric. In the former the iron is bivalent, Fe^{II}, in the latter trivalent, Fe^{III}, or sometimes sexavalent, Fe₂vi. Why the quantivalence of the atom of iron should thus vary, is not at present known, but it is an important fact.

The ferrous salts, when moist, are easily oxidized upon exposure to the air, or to oxidizing agents. Ferrous solutions, free from ferric salts, are not affected by potassium ferro-cyanide, or tannin. The sulphate of iron is an example of the ferrous variety, with the formula 2 Fe₂SO₄, while the persulphate is a ferric salt, the formula being 3 (Fe₂SO₄).

Reduced iron, or iron by hydrogen, Fe₂, is pure metallic iron, in a very finely divided state. This form of the metal has a great affinity for oxygen, and if, during the process of manufacture, and while still hot, it be thrown into the air, it takes fire and falls to the ground as an oxide. This preparation, valuable as it is supposed to be, often contains impurities, but aside from these, if long kept, or if exposed to moist air, becomes oxidized. In order to get the best results from its administration, it should be furnished by the manufacturer in drachm vials, hermetically sealed, and which, once opened, the contents should be immediately used, or thrown away.

In the stomach, the recent preparation is decomposed, sulphureted hydrogen being evolved, which renders its use objectionable in some cases.

Ferric salts are either normal or basic, the soluble normal salts having an acid reaction. Solutions of the ferric salts are darkened by ferri-cyanide of potassium to an olive-brown color, while the ferro-cyanide of potassium precipitates Prussian blue. Solutions of ferric salts, treated with metallic iron, sulphurous acid, or other deoxidizing agents, are reduced to ferrous salts. Gallo-tannic acid causes a blue-black precipitate and color (writing ink).

Pharmacology.—The preparations of iron are so numerous that space will permit of but a brief mention of the most important.

The oldest form of iron in use is the red brown oxide, or iron-rust. The one most largely used is the tincture of the chloride of iron, being a solution of a ferric salt. As found in the drug stores, it is usually prepared from the strong solution of the "United States Pharmacopœia," by mixing it with alcohol in the proportion of 6 fluidounces of the former and 19 fluidounces of the latter. The directions of the "Pharmacopœia" are, that after thus mixing, the solution should stand in a closely-covered vessel for at least three months before being dispensed. I doubt of this part of the formula being complied with in many cases.

The strong solution, or liq. ferri chloridi, of the "United States Pharmacopœia" is furnished to the retail druggists by the manufacturing chemists; but I have found it to vary widely in character. Some solutions, having been carefully prepared, and being free from impurities, would keep unchanged for months, while others would show, in a comparatively short time, a large amount of a reddish-brown precipitate, due to organic impurities present. This precipitate I have noticed in the furnished tincture upon standing for some time. This, of course, renders the preparation less efficient, the proportion of the metal having been reduced to an unknown ex-

tent. Valuable as is this old, and in many cases reliable, hematinic, its strong acidity and astringency renders its use inadvisable in many conditions where iron is indicated.

What is needed by the clinicians is a preparation of iron free from the above objections, and one that is readily assimilable. To meet this demand, a number of preparations have been placed upon the market, prominent among which are the following: The albuminate of iron, *ferrum saccharatum* (or eisensucker of the Germans), dialized iron, the peptonate, *ferrum sanguinis*, levulose ferride, the elixir of the three chlorides, salicylate of iron, and the succinate, or the elixir of the succinate, of the peroxide of iron.

The Albuminate.—This was introduced in Europe in 1878, but met with but little favor in this country. It is now being manufactured and pushed here, however.¹

Dumont, in *Le Progress Medicales*, claimed that albuminate of iron was more readily assimilable than other salts of the metal, seldom causing gastric disorders. Dumont's claims have not, we believe, been sufficiently substantiated.

The Peptonate.—This form has also met with but little favor, being, like the albuminate, a weak and not readily assimilable preparation.

Ferrum Saccharatum.—A sweet-tasting preparation, and at one time used considerably; but it fell into disrepute, and is scarcely known among the druggists of this country.

Levulose Ferride.—This resembles the old *ferrum saccharatum*, and leads one to ask if it is not the same preparation under a new name. Good reports have been made of its use, however. Dr. Aulsebrook, in the *N. Y. Medical Record*, spoke very highly of it, and thought it especially adapted to children where iron was indicated, on account of its pleasant taste.

Dialized Iron.—This liquid preparation is supposed to contain 3.5 per cent. of iron, and at one time was freely prescribed.

Blair's Sons, pharmacists, in this city, claim to have been the first makers of dialized iron in this country.

The merits claimed for this form of iron were: No styptic taste or effect, and being neutral in reaction, would not blacken the teeth, also, being devoid of astringency, would not constipate. It was also said to be equal, if not superior to, the hydrated oxide of iron as an antidote in arsenical poisoning. From its character, and the ready manner in which it became a coagulated mass, I can readily understand why it should so act. It is, however, but a weak preparation of iron at the best.

Depaire says of it: "The action of dialized iron upon animal products forbid us to suppose, *a priori*, that it acts like other ferruginous preparations."

Bouchardet declared that "Theoretically, dialized iron must be regarded as an inert, or, at the best, but a very feeble, preparation of iron."

Persone stated that "It is completely insoluble in the gastric juices. When injected into a dog's stomach during active digestion, and an examination was made two hours after, flakes of oxide of iron were adherent to the undigested food, but not a trace of iron was discernible in either the gastric liquids or on the surface of the alimentary canal. Its inactivity may be inferred from its insolubility."

Dr. R. V. Mattison has shown that dialized iron is probably insoluble in the gastric secretions, and Prof.

Stillé said that he had found it "utterly to fail in cases for which iron appeared to be the proper remedy, and which other preparations caused to speedily improve."

Others thought that they found marked improvement in cases of anæmia upon the administration of this form of iron. In 1878, Dr. Da Costa reported good success from the hypodermic use of dialized iron, using 15 m at a time. Other observers of equal note found it unsuitable for hypodermic use. I find, upon inquiry at the prominent pharmacies, that this preparation is being seldom prescribed. Considering it from a chemical and pharmaceutical standpoint, it is surprising that it held its place as long as it did.

Malate of Iron.—This is readily prepared in solution, by macerating iron filings or small tacks in the expressed juice of sour apples until the reaction ceases. A preparation of ferrous malate, called *extractum ferri pomatum*, is officinal in some of the European "Pharmacopœias," and is to be found in some of our pharmacies. It is of pilular consistence, and contains a variable quantity of iron, sometimes as much as 8 per cent. I have used this extract in some cases, but did not find it of sufficient advantage over other preparations to continue its use.

A more convenient form in which to administer the malate would be by making it after the following formula:¹

One thousand parts of sour-apple juice and 100 parts of precipitated sulphate of iron are macerated together for a week in a glass vessel, exposed to the sunlight. The liquid is then filtered. The filtrate is dialized, evaporated on a water-bath to the consistence of honey, 10 per cent. of sugar added, spread upon panes of glass and dried at a temperature not exceeding 45° C.

The scales thus obtained are greenish-yellow, soluble in water, and of an agreeable acidulous taste. Children and women are said to be fond of this preparation. Made in the form of tablets, this might, upon further investigation, prove to be a very valuable hematinic.

*The Elixir of the Three Chlorides*² is the name of a preparation of the chlorides of iron, mercury and arsenic which has met with much favor. Dr. I. N. Love speaks very highly of it, and there is no doubt but that in certain cases such a combination will be very effective, and one well worthy of more extended trial.

I used to prepare an elixir of iron and gentian which was highly appreciated by both physicians and patients, as follows: The simple elixir of gentian was first prepared, and to this was added the tincture of the chloride of iron, in the proportion of five minims to the fluid drachm, the styptic taste of the iron being overcome by the addition of eight to ten grains of the citrate of potassium to the fluid ounce.

The tincture of the chloride of iron is such a valuable preparation that we cannot afford to abandon it, and yet there are many cases in which its use is prohibited, owing to its styptic and astringent properties. Cannot some of our enterprising pharmaceutical chemists give us a form or modification of this old standard tincture deprived of its objectionable features, without impairing, in any way, its efficiency?

In the administration of the tincture of the chloride of iron, it must be remembered that 25 minims of the

¹ Bulletin of Pharmacy, May, 1891.

² Introduced by the house of Renz and Henry, Louisville, Kentucky.

¹ Made by Flexner Bros., St. Louis. (?)

tincture contains nearly 1 grain of the metal; that the total amount of iron existing in the whole mass of the blood of a healthy person does not exceed 2.48 grammes, or about 39 grains. It would take but a few such doses to introduce into the system an amount of iron in excess of the normal proportion, provided it was all assimilated.

Ferrum Sanguinis.—This preparation, introduced from France, is stated to be pure "haemoglobin," obtained from bullock's blood. It comes in pill form. While I have had no clinical experience with it, ferrum sanguinis may be a very good form of administering iron.

Salicylate of Iron.—We hear very little of this preparation. The question arises, that where a salicylate is indicated, would not a different combination be preferable?

*The Succinate of the Peroxide of Iron.*¹—This, presented in the form of a palatable and pleasant elixir, would seem, from its chemical composition, to be almost an ideal preparation. The formula is $\text{Fe}_2\text{H}_2\text{C}_4\text{H}_4\text{O}_4$. As iron is, probably, essentially an oxygen carrier, a glance at the formula will show the importance of this recent addition to our ferruginous preparations. Being free from stypitic taste or properties, non-astringent and palatable, parting with its oxygen readily when introduced into the system, and not deranging digestion, it will meet many cases where iron, while indicated, cannot be tolerated.

PHYSIOLOGICAL EFFECTS OF IRON.

1. *On Animals.*—According to our present understanding, the action of iron is to increase the development of the red blood corpuscles, furnishing them with oxygen, and rendering them fit vehicles for carrying oxygen to every part of the animal economy. It has also been shown that the animals in whose blood the proportion of iron reaches more nearly that of man, are the hog, dog, ox, and goose. The quantity may be increased by the proper administration of the drug.

2. *On Man.*—The action varies greatly and according to the preparation used. In large doses the drug is apt to derange the digestion, giving rise to oppression after eating, sometimes producing gastralgia and pyrosis; and, if continued, the dyspeptic symptoms increase.

Is iron a food, as many have claimed? For a long time it was supposed that none escaped from the body, although given for a long time; but this was disproved by Zaleski.² He experimented upon rabbits and kittens with the sodic tartrate of iron, obtaining some remarkable results, and reaching the conclusion that the liver was the excretory organ for this drug.

Skoortzoff, in Warsaw, from laboratory investigations regarding the influence of iron over the nitrogenous metabolism in the healthy body, gave the following conclusions:

1. Iron has no marked influence on nitrogenous metamorphosis in the healthy body.
2. The ingestion of iron in small doses of $\frac{3}{10}$ to $\frac{1}{2}$ grain causes a very slight decrease in the assimilation of nitrogenous portions of the food.
3. After bleeding, the assimilation of nitrogenous substances increases, whether or not iron is used or not; but, if iron be used at this time, haemoglobin is rapidly introduced, and the drug would seem to be of value in restoring the bodily weakness.

Bartholow says: "The sulphates, nitrates, and chlorides of iron are very astringent, and cause constipation. They coagulate blood, forming a tough magma. For intestinal hemorrhages, however, the astringent preparations of iron are almost useless, as they are converted into inert sulphides as they pass along the canal."

Iron, as well as all the metals, exerts a toxic effect upon the nerve centers—as well as upon the nerves themselves—and also upon the muscles. This applies especially to the insoluble forms of iron, and should be borne in mind in prescribing.

The liver can care for the drug in small doses; but large ones show a tendency to accumulate there, with consequent derangement.

It is supposed that iron, introduced into the system in an uncombined state, is again eliminated without being used.

Cappota, in *The St. Louis Med. Review*, reported some experiments made upon full-grown and healthy chickens, since in birds the circulation, the respiration, and heat production are more active, and on that account tissue changes are more rapid, and because their blood cells are better adapted to accurate and more complete examinations than that of mammalia. From such studies Cappota concludes that:

1. The lowered amount of hemoglobin and the histological changes of the blood depend, not upon the condition of the food, but simply upon the want of iron, since with this one cannot only avoid, but also improve, such conditions.

2. Iron given in a form uncombined with organic material, is taken up and assimilated by the animal organism. This view is justified, not only by the increase of hemoglobin, but also by the fact that the iron thus administered is used up in proportion to the amount previously withdrawn, and that this ceases as soon as the organism has obtained its full amount of iron.

Dr. Cressler, in the *Memphis Med. Monthly*, takes the view that iron given in erysipelas, takes into the blood the oxygen required, which, coming into direct contact with the streptococcus, causes their destruction.

From all the foregoing, it must be evident that we have something yet to learn regarding the physiological action of the drug under consideration.

THERAPEUTIC USES OF IRON.

Sée states that it should not be administered in pseudo anæmia, *i. e.*, in those forms due to inanition or enervation, or caused by intoxication, or of a specific nature. He claims that the drug is fitted for true anæmia only.

It has been demonstrated that if iron does not improve the digestion and appetite, it is practically useless in anæmia.

In epilepsy, Bartholow considered iron hurtful, except as a bromide, in combination with the bromide of potassium.

In strumous enlargement of the cervical, inguinal, and mesenteric glands, and in rickets, iron is considered to be of great value.

In erysipelas its internal administration is of undoubted benefit. As a topical application the following formula, a favorite one with Prof. J. E. Garretson is used successfully at the Medico-chirurgical Hospital:

R.—Tr. ferri chloridi fʒj.
Quiniae sulphatis ʒj.
Tr. cinchonæ fʒij.

M.—Sig. Paint the parts with the mixture until the skin remains perfectly black.

¹ From the laboratory of Parke, Davis & Co., Detroit.

² *London Lancet*, July, 1888.

The application must be thorough ; keep painting as long as any redness appears, and the germs being thus destroyed the disease is checked, and in a few days the black mask peels off, leaving the skin healthy.

In some cardiac affections, a combination of iron and digitalis is of marked benefit. This is particularly the case where there is dilatation without compensatory hypertrophy. Under such conditions the two drugs mentioned, given together, materially assist nature in establishing the compensation.

Diseases of the liver. Iron has been considered as being contra-indicated in hepatic affections, even when coexistent with anæmia. Later researches, however, reveal the fact that if the proper form of iron be used, and in proper doses, it is of great benefit in such conditions.

Iron is given in the following important diseases, the writers' names being given as authority :

Albuminuria, Waugh ; anæmia, most authors ; ascites, Niemeyer ; carbuncle, Paget advises large doses, giving a drachm of the tincture every four hours ; chlorosis, Niemeyer and others ; cholera, E. McClellan uses the sulphate as a prophylactic in cholera epidemics ; chorea, Wharton Sinkler, Radcliffe, Da Costa ; diphtheria, Sir Morell McKenzie gives the tincture of the chloride in 30 minim doses to adults, and to children in proportion ; dysentery, McLean ; erysipelas, Garretson, Reynolds, etc. ; hemoptysis, Bartholow says that inhalation of a spray of Monsel's solution will often arrest a hemorrhage at once. Da Costa sprays with a solution of the chloride of iron ; neuralgia, Austie gives the tincture in doses of 30 to 40 minims. In subacute pleurisy, with effusion, Loomis gives iodide of iron, and in purpura hemorrhagica, Loomis and Sparks give the tincture of the perchloride in 15 to 20 minim doses, three times a day. Immerman and Waugh, however, state that iron is contra-indicated in this condition until some days after the hemorrhage ceases ; spermatorrhœa, among other remedies, Gross gave the tincture of iron, combined with cantharides.

The writer, in reviewing the mass of testimony in medical literature, regarding the use of iron, comes to the following conclusion : That as iron, in some form, is as essential to the animal economy as food and air, some one of the various preparations offered will meet every case, if judiciously selected. To simply prescribe "iron" without regard to the existing conditions or complications, or the form to be administered, is utterly absurd.

I have recently tested a sample of the succinate of the peroxide of iron, and found it to be very beneficial in several cases where all other forms heretofore used positively disagreed. One patient was a lady very susceptible to iron, and who recognized its presence in prescriptions where I thought it impossible, but who took the elixir of the succinate readily, and with positive benefit. It did not constipate, but, on the contrary, stimulated peristalsis. This was noticed in other cases also. It would seem from its composition to be a very valuable addition to the list of hematinics, and is well worthy of a more extended trial.

AUGUST, 1891.

THE TREATMENT OF VIPER BITES.—The Paris Academy of Medicine has awarded the Orfila prize to Professor Kaufman, of the Alfort Veterinary School, for his discovery of a specific for viper bites. The treatment consists in bathing the wound with a solution of one part of chromic acid to one hundred of water.—*Ex.*

KERATITIS.¹

By F. W. FRANKHAUSER, M.D.

MR. PRESIDENT AND FELLOW-MEMBERS:—In presenting this paper on Keratitis I do not propose to bring all that is new, but to try to bring them in such a manner that we may all be able to treat this disease intelligently.

The cornea has a peculiar situation, being fitted as it were into the sclerotic coat of the eye, as a crystal in a watch. The last histological description gives it five membranes, but for our purpose we shall simply use two—Bowman's membrane and the membrane of Descemet, anterior and posterior. The substance in itself is of a modified connective tissue formation, united into bundles, and into lamella. Their general direction is parallel with the sclerotic, and are crossed or intersected by others crossing in different angles. The spaces thus formed are called the corneal corpuscles.

Keratitis is an inflammation of the cornea. It may be divided into phlyctenular, vascular, diffused, suppurative, and neuro-paralytic. As to cause, traumatic and idiopathic. As a sequelæ and undoubtedly tubercular.

Pathology of Keratitis.—The first sign of an inflammation of the cornea is opacity, development of blood-vessels, loss of substance, and formation of pus, with different degrees of destruction or proliferation of corneal corpuscles, and emigration of lymphoid cells, by the natural channels and by cell proliferation through the corneal tissue. The fibrillæ degenerate, and, by a collection of serum in the anterior chamber, the membrane of Bowman is destroyed in part, or total. The membrane of Descemet is more resistant ; the inner lining may and often does undergo fatty degeneration. The tissues of the cornea may soften and die *en masse*.

Where the tissues are destroyed an ulcer results. If the ulcer should perforate, the iris comes forward, by pressure of the contents of the eye-ball, and falls into the opening ; and, if it remains, forms what is called anterior synechia. In very large ulcers the lens may be pushed forward, or even expelled.

Opacity of the cornea is due to the irregularity of structure in the repairing process. The repairing tissues are not distributed with that regularity, and thus a cicatrix results, which is generally indelible.

Symptoms of Keratitis.—Pain in the eye ; pupils contracted ; lachrymation ; photophobia, or pain from light, radiating to different parts of the eye-ball and temporal region, and eventually the cervical region of the head ; hyperæmia of the cornea, radiating in all directions from the inflammatory spot, into the sclerotic and conjunctiva ; iris responding to light ; opaque spots are soon visible ; there are generally some chilly sensations early ; some increase in temperature, with general depression of system.

In phlyctenular keratitis the opacity may not be larger than a point or head of a pin ; it may be a solitary spot, or there may be a number of blood-vessels running into it ; profuse lachrymation and photophobia occurring in the under-fed or in persons of a scrofulous or tubercular diathesis, or following some of the exanthematous diseases, as measles or scarlet fever, etc. They sometimes recur again and again. According to Ivanoff's investigations, the phlyctenular makes its appearance upon a nerve

¹ Read at the meeting of the Berks County Medical Society, at the residence of Dr. D. Webster Kupp, Gibraltar.

twig; finally, if not arrested, running into a gray ulcer. Following the epidemic of measles of last winter, there were a great many cases of phlyctenular keratitis, possibly caused by the depression of the system and the catarrhal symptoms which remained.

Vascular keratitis may result from a number of attacks of phlyctenular ulcers, and suddenly the whole cornea becomes hazy; the membrane of Bowman becomes roughened with a network of blood-vessels. Pain, lachrymation, photophobia not so bad, and is generally called panus. This form is often found in granular lids, and is no doubt often caused by the condition of the lids.

Keratitis Diffused; or, Parenchymatous Keratitis.—In this form there is no roughness, but appears like a smoky haze at the middle or margin of cornea, generally coming on suddenly, and spreading over the whole cornea in a few days. If it continues, the cornea becomes white, or of a bluish-white color.

It is generally constitutional. In children syphilis is often found to be the cause, the teeth showing an improper development. In adults it often accompanies the secondary eruptions of teeth.

Suppurative Keratitis.—As in other inflammations, so in the inflammation of the cornea, pus may be the result, even without an ulcer anteriorly, or of the superficial coat of the eye, pus may form in the anterior chamber; those are generally cases of an injury or of a tuberculous character, unless following an injury, always occurs in a system that is debilitated by disease, and may occur at all ages.

The presence of pus in the anterior chamber denotes a large influx of lymphoid cells, with proliferation of the corneal corpuscles.

Pus may appear in the anterior chamber in three ways:

The wandering cells force their way downward through the margin—usually in a whitish streak—and emerge through the meshes of the pectiniform ligament into the aqueous humor.

By perforation of the membrane of Descemet. By proliferation of the endothelium of the posterior surface, accompanied by a low grade of iritis, which also yields lymphoid cells. The latter usually accompanies paralysis of the fifth pair of nerves.

Keratitis suppurans is always accompanied by severe pain in the eye of a lancinating character, often extending into the temporal region; photophobia is well marked; the pupil is contracted; there is generally a small pitting in the cornea, often near the center, and nearly always surrounded by haziness. The hypopyon makes its appearance by a yellow line at the base of the anterior chamber, and continues to raise.

Noyes, on "Diseases of the Eye," p. 187, says: As long as the formation of pus continues, or until it has an exit, or it is absorbed.

The cornea becomes denuded of its epithelium, and the tissues slough.

If perforation of the cornea occurs, the iris falls into the opening of the cornea caused by the pressure of the contents of the eye-ball. If the iris remains in the opening it soon becomes adherent.

Neuro-paralytic and bulbous cornea are rare, and need no mention here.

Treatment.—In mild cases of inflammation of the cornea: Atropine, grs. j to ij-fʒj of water, two drops three or four times daily dropped into the eye. Boracic acid, grs. v to fʒj of water, as eye-wash several times daily. Bathing with hot water, or dry heat applied for ten minutes at a time, several times a day, will generally bring it under control; the eye,

in the meantime, being shaded with a patch or smoked glass.

If any constitutional disturbances occur, they will need attention.

All secretions should be watched, and treated if deficient.

In phlyctenular keratitis following measles, the catarrhal symptoms will need treatment, as a number of cases following measles would not get well until the coryza of the nose was brought under control.

Where the disease is not brought on by injury or from a strumous disposition, it will generally yield to simple treatment.

But where inflammation of the cornea follows any of the former diseases, the treatment is not always an easy matter. If the acute stage has passed, R.—Hydrarg. ox. flav., grs. j-ʒj, of ointment; a small amount used twice a day; or, hydrarg. chloridi mite., dusted into the eye once a day.

But where an ulcer forms near the center, atropine, grs. ij to aqua, fʒj; cocaine, grs. iv, several drops four times daily, to prevent the iris from falling into the perforation of the cornea. Should perforation occur, and the ulcer being near the margin, then eserine, grs. ij; water, fʒj; two to five drops three times daily, to contract the pupil.

Keratitis Suppurans.—This is often due to an injury, or from a lowered state of vitality.

As to treatment of the ulcer, the system is generally at fault, and constitutional treatment is needed in all cases early; quinine in large doses combined with morphine, to prevent the immigrating of white corpuscles and relieve pain. Later quinine only in tonic doses, besides the local treatment of atropia, cocaine, or eserine. As all suppurating surfaces are covered with a pyogenic membrane filled with germs, so is suppurative keratitis. First, then, is to arrest suppuration, establish drainage, or absorption of the pus, and bring the sloughing tissues to a healthy condition. If no hypopyon has formed, the ulcer touched with a pointed stick of argentum nitras, hot applications, or the ulcer may be curetted with a small blunt curette, once daily until the tissues cease to slough. The actual cautery has strong advocates. As early as 1873, Martinache,¹ of San Francisco, recommended the actual cautery. Later the results of Gayet, Grandmont, Martin, Fuchs, Nieden, Schweigger, Knapp, and Gruening, placed this treatment upon a secure basis. Nieden's observation on more than one hundred cases, in addition to serpent and rodent ulcers in scrofulous abscesses both marginal and central, vesicular keratitis, and parenchymatous corneal abscess.

(1.) Again, Dr. De Schweinitz's² observations of about thirty cases, including:

1. Small central ulcers in badly fed children, either due to neglect or imperfect treatment tending to form abscesses.

2. Small central ulcers in scrofulous patients, the ulcer having a slightly turbid base, chronic in character. In all cases there were the appearances of former granular lids.

3. Phlyctenular ulcers, beginning with small pustules, beginning at the corneal border speedily ulcerating, and surrounding themselves with a yellow area of infiltration, with a strong tendency to perforation.

4. Infecting or sloughing ulcers with hypopyon.

5. Marginal ring ulcers.

¹*Pacific Medical and Surgical Journal* of 1873.

²*TIMES AND REGISTER*, March 21, 1891.

6. Herpes of the cornea, associated with herpes zoster ophthalmicus. Dr. De Schweinitz's experience has been only with the actual cautery, using a probe made of platinum, or a steel needle about the size a knitting needle according to the location of the ulcer, either atropine or eserine with cocaine. A Bunsen burner being used to heat the probe red hot, all of the sloughing tissues gently but thoroughly cauterized, then washing out the parts with boracic acid, a drop of atropine in solution, and bandage. Others preferring the galvano cautery; as your loop is heated it must be kept under control by the operator without removing it from the eye. I myself have not had any experience with either; in suppuration of the cornea, I should prefer the galvano cautery, as its use in the nose and pharynx have been in my hands attended with great success. Others¹ preferring the bichloride of mercury after curetting the ulcer thoroughly. The ulcer is washed with bichloride of mercury 1-1,000 or 1-3,000; following the operation, the eye is washed with bichloride of mercury 1-5,000 every two or three hours. This I have used a number of times successfully.

The plan which I have used a number of times in suppuration of the cornea accompanied with hypopyon, is to make an incision at the cornea-sclerotic junction, and leave out the secretion, which I think is the best for drainage. After washing it out with acidum boracicum, grs. x-f̄j water, the eye is covered with a pad of absorbent cotton wet in the solution of boracic acid, and changed every hour, using atropine or eserine as before indicated. Now, I would use hydrogen peroxide in 10 per cent. solution.

Allow me, if you please, to give you the history of a few cases.

L. Z., aged thirty-six, a carpenter by trade in the Philadelphia and Reading car shops, having been struck by a broken pine knot as he was working with a saw, came to my office June 24, 1889, twelve days after the accident. Had been under another oculist's care for ten days, who told him he could go to work. The second day following, he saw his family physician, who referred him to me. There was a large ulcer near center of the cornea, of left eye deep, excavated, sloughing, and hazy iris contracted, conjunctiva congested; pain in eye and temporal region of left side, lachrymation, photophobia, anterior chamber filled to the middle of the cornea with a purulent pus. I proposed making an incision at the cornea-sclerotic junction, and evacuating the pus at once, but as he had not slept the previous night, he did not consent to the evacuation.

The following morning I made an incision at the cornea sclerotic junction, and removed nearly one-half drachm of tough, purulent lymph, resembling pus, washing it with hydrarg. corosivum, 1-3,000, when the eye began to improve; washing with hot water every hour, and bichloride solutions every three hours; but after three days there was more accumulation, which was removed in the same way, after which the improvement was steady until recovery, leaving a dense leucoma, interfering with distant vision, but giving him fair working vision.

Mrs. E. H., aged thirty two, had amblyopia of left eye since childhood. Immediately following confinement, had an attack of keratitis suppurans; but as she could not go to see an oculist at that time, not much was done for it. As soon as she was able, her physician referred her to me, and two weeks following

labor she came to see me. I found a large sloughing ulcer covering the center of cornea, excavated, ragged edges, with pus in the anterior chamber, reaching to the middle of the cornea. The pus was at once removed, by the cornea sclerotic incision, washed out with bichloride sol., 1-3,000. With supporting treatment, she made a slow but steady recovery, but with a large dense leucoma, with barely any vision. I advised her, if it gave her any more trouble, to have the eye-ball removed. Two months later, being away from home on a visit, she was suddenly seized with the trouble again, and had the eye-ball removed. The right eye has since excellent vision, and the patient is about forty pounds heavier than she had ever been before.

Case third: J. R., aged seventeen, came to my office July, 1890. Mother died of tuberculosis. Has posterior spinal curvature; ulcer in each eye for at least ten days, and after "powwowing" without success, went to see an oculist. A large ulcer was found on each cornea, just below center, photophobia, lids swollen, pain, conjunctiva congested, general health debilitated.

The eyes were treated with atropia, gr. 1-f̄j, three times daily. Hot water applications every hour. Internally, syrupus acidum hydriodicum, f̄ss, four times daily. In less than ten days the ulceration was under control, leaving a small leucoma on each eye.

T. T. and W. T., aged three and five respectively, brothers, had an attack of phlyctenular keratitis, following measles; opaque spots on center of each eye, conjunctiva congested, pupils contracted, lids swollen, photophobia and pain well marked, coryza of both nostrils, discharging a purulent serum, excoriating wherever it came in contact.

R.—Atropia..... gr. j.
Cocaine..... gr. iv.
Aque..... f̄j.

M.—S. Drop in eyes four times daily.

Also,

R.—Syrupus ferri iodidi..... gtt. v.
Tr. Belladonna..... gtt. ij.

Four times daily.

Keeping the eyes shaded gave me excellent results. In a number of cases of phlyctenular keratitis, during last spring, I noticed that as the coryza improved so would the keratitis, even if it were only on one side.

I have at present under my care a lady suffering from keratitis diffusa, caused, I think, by an irritable ovary.

Mrs. R., aged twenty-eight, has three children; two miscarriages in last two years. First noticed trouble in right eye two years ago; since has not been well. Has gone the rounds of several doctors. I saw her first two weeks ago. Cornea hazy, pupil contracted, zone of blood-vessels in all directions, lids swollen, photophobia, conjunctiva swollen and congested, intense pain, loss of appetite, and is losing flesh.

Whilst the keratitis will improve, it will invariably get worse during menstruation.

On examination, found right ovary very painful to touch; os lacerated and womb prolapsed. Locally, I am treating the eye with

R.—Atropia grs. ij.
Cocaine..... grs. iv.
Aque..... f̄j.

M.—S. Two drops in the eye four times daily.

With large doses of quinine and pulsatilla, in 5-drop doses, four times daily, the tender ovary is improving, as is also the inflammation of the eye.

¹Dr. E. W. Jackson, TIMES AND REGISTER, October 4, 1890.

In the discussion that followed, Drs. Beaver, Carpenter, of Pottsville, and Cleaver, participated—

Dr. D. Webster Kupp read a paper on "Puerperal Septicæmia."

Drs. Bachman, Carpenter, S. L. Kurtz, Landis and Beaver, taking part in the discussion.

The Society then adjourned to the dining-room to partake of a feast prepared by the hostess, Mrs. Dr. Kupp. During the feasting there were a number of toasts, responded to by Drs. S. L. Kurtz, Carpenter, D. B. Beaver, and Bachman—a symposium in which Israel and Samuel were the organons.

After which the Society adjourned, all being well pleased with the trip to Gibraltar.

THE TEMPERANCE QUESTION.¹

By N. S. DAVIS, M.D.

MEMBERS OF THE MEDICAL PROFESSION AND FELLOW CITIZENS: We have assembled here and now for the purpose of considering one of the most important subjects that can engage the attention of an American citizen. From the most accurate sources of information available, I learn that during the year 1890 more than 80,000,000 gallons of distilled spirits, 40,000,000 gallons of wine and 800,000,000 gallons of malt liquor were consumed in the United States, making a total of fermented liquors and distilled spirits of 920,000,000 gallons. From the same sources it is ascertained that about 10,000,000 gallons of distilled spirits were consumed in the arts, manufactures and medicine during the same year, leaving the amount consumed for drinking purposes 910,000,000 gallons, at a cost to the consumers of more than \$800,000,000, or about \$13 per head for the entire population. During the same year, 1890, according to a carefully prepared statement in the *London Times*, the amount of distilled spirits consumed in Great Britain was 38,324,000 gallons; of wines, 30,000,000, and of beer, 1,124,956,000 gallons, making a total of 1,193,298,000 gallons at a cost to the consumers of more than \$697,000,000. If we deduct from the total of distilled spirits the same ratio as is used in the arts, manufactures, etc., in this country, it will leave the amount paid for these drinks \$632,000,000, or more than \$16 per head for the entire population of that country.

If we add to the \$800,000,000 paid in our country annually, for intoxicating drinks, the value of the time lost by its effects on those who drink it, in stopping their work, in inducing sickness and in increasing both crime and pauperism, we shall have an aggregate of indirect cost of much more than another \$800,000,000, or a total bill resulting from the use of intoxicating drinks in this country of more than \$1,600,000,000 in a single year.

And what does the consumer get for all this enormous pecuniary expenditure? Does it bring a single item of clothing for himself, his wife, or his children? Does it take the place of food so that he or his family needs less provisions or can get board at less price per day or week? Does it strengthen him in body and mind and thereby enable him to do more work and do it better? Does it promote his physical health, sharpen his intellect and elevate his morals? Is there an intelligent man or woman in this audience, or anywhere in this country, who can conscientiously answer any of these questions in the affirmative? Certainly not. That it furnishes neither clothing nor food is

shown by the thousands of wasted fortunes, impoverished families and ragged, homeless or worse than homeless children that follow the long line of consumers, or crowd the hovels, alleys, poor houses and asylums of every part of our broad land.

That it does not strengthen the consumer either in body or mind, enable him to do more or better work, is shown by a comparison of the personal condition and labor results of the liquor consumers with the total abstainers, side by side, in every field of human industry, in every climate, and in every grade of society. Wherever large numbers of men are engaged in the same work, subjected to just the same conditions, but a part of them taking the ordinary allowance of fermented or distilled drinks and the other part totally abstaining from the same, careful examinations have shown that the former lose more days from sickness and accomplish notably less every month than the latter. This may be verified by the examination of the records of every large manufacturing establishment, railroad or other corporation, or even social benefit organization, in which records are regularly kept of the time lost by sickness or otherwise, and of the amount of work done by each person. The same results are shown even more strikingly by an examination of the official reports of the Registrar-General of the British Armies both at home and in the Indies, as well as by the records of our own armies from the period of the War for Independence to the present time. And if you extend your inquiry to the comparative rates of mortality of the alcohol consumers and the total abstainers; the vital statistics of every city or country where the previous occupations and habits of the descendants are given; the books of every life insurance company in which the distinction between moderate drinkers and total abstainers is noted, and the statistics of such social and mutual benefit organizations as the Odd Fellows and Knights of Pythias (which do not prohibit moderate drink) with those of the Rechabites and Sons of Temperance (that do require total abstinence), you will find the ratio of mortality invariably much higher in the former than in the latter. That the drinking of alcohol liquids does not sharpen the drinker's intellect or improve his morals is most strikingly shown in the personal history of those who crowd our hospitals and asylums for the sick, insane and demented; who nightly fill the places specially established for the sale of these liquids and make night hideous with revelry, crime and bloodshed, and who fill our police stations, criminal courts, reformatories and penitentiaries with their enforced presence.

If all this is true, and the 910,000,000 gallons of fermented and distilled liquors drank in this country annually, at a cost of \$1,600,000,000 or \$2,000,000,000, bring neither food, clothing, shelter, health nor morality to the drinkers or to those dependent upon them, but instead poverty, privation, sickness, degradation, crimes and deaths, why do they continue to be used?

This is the one all-important question of the hour, the one that imperiously demands the full consideration of every intelligent citizen, and more especially that of every physician and guardian of the public health and happiness.

Why does an intelligent and free people continue to spend such enormous sums of money for drinks that so plainly bring nothing but evil return? I answer: First, because of the erroneous education of the greater portion of the people in regard to the true nature and effects of alcoholic drinks when taken into the human system, and, second, because of their

¹ A paper read before the International Congress on Staten Island, N. Y., July 14, 1891.

power to pervert the sensibility of the brain and nervous system, and thereby develop the most fascinating and persistent mental delusions.

A large majority of the inhabitants of every country receive the most influential and enduring part of their education not in the school-room nor from books, but from the opinions, maxims and practices that they hear and see from infancy to adult age in the family, on the street and in the social circles of the neighborhood. From a very early period in the history of these drinks, before chemistry had separated and revealed the nature of the active ingredient that pervades them all, the people, judging only from the sensations and actions induced by their use, were very generally persuaded to regard them as stimulating, warming, soothing and restorative. Consequently they speedily found their way into almost every household in Christendom, and were ever ready to relieve the baby's colic, to enable the mother to give more milk, to relieve the father's weariness, and to prevent the boys and girls from 'taking colds' when exposed to wet or cold weather; and, of course, doctors, priests and people all united in calling them tonics, stimulants and restoratives for the body and soothing exhilarants for the mind. And it is true that these same designations and the ideas conveyed by them are still dominant in the family circles, the highways and the newspapers of this and other countries. Even the great majority of medical men still contribute their full share to the support and perpetuation of these very general and destructive popular errors, by habitually using the same language and sanctioning the same practices regarding them.

I call them destructive popular errors advisedly, because the abundant results of their use in every circle or grade of human society, and because the most rigorous, varied and skilful scientific investigations have both demonstrated that no form of alcoholic drink is capable of either warming, strengthening, nourishing or sustaining the life of any human being. I presume many of those who are listening to me will regard this as an extravagant statement, more especially as they remember the many nursery and newspaper stories they have heard concerning sick persons who were alleged to have been kept alive on nothing but wine, brandy or whiskey.

The falsity of all such stories is made apparent by the fact that nineteen-twentieths of all the alcoholic drinks given to the sick are given in connection with sugar, milk, eggs or meat broths, which furnish the nutriment and would support the patients better if given with the same perseverance without the alcohol than with it. It is true that chemical analysis detects the existence of some gum, sugar, and starch or fecula in the fermented liquids, beer and wine, which may be classed as nutriment. But the proportion is so small as to be of no appreciable value. Baron Liebig, one of the most eminent chemists of Germany, has left on record the statement that "If a man drinks daily eight or ten quarts of the best Bavarian beer, in the course of twelve months he will have taken into his system the nutritive constituents contained in a five-pound loaf of bread."

If a man must take a whole year and drink twenty-three barrels of beer to get into his system the 'nutritive constituents contained in a five-pound loaf of bread.' It is certainly not sufficient to be worthy of the slightest consideration as food. But, if you keep in mind the fact also, that the person who drinks at retail the twenty-three barrels of beer at 5 cents a pint, pays about \$300 for it, and takes into his system during the same time, about one barrel of

absolute alcohol, you will be able to see clearly the supreme folly of calling malt liquors and wine nourishment. The only ingredient in the various malt liquors, wines, and distilled spirits that is capable of exerting any important influence on the living human system is the alcohol they contain. This alcohol is exclusively the product of vinous fermentation, a retrograde chemical process by which sugar or saccharine matter is converted into alcohol, averaging in beers 4 per cent. and rising in wines to 15 per cent., and in the distilled liquors to 50 or 60 per cent. Consequently those persons in this country who drank the 70,000,000 gallons of distilled spirits, the 40,000,000 gallons of wine, and the 800,000,000 gallons of malt liquors during the year 1890, received into their stomachs and blood not less than 80,000,000 gallons of absolute alcohol. And now comes the question of more importance to the human race than any other of a temporal nature, namely, what are the actual effects of this alcohol on the living human system?

By all chemists and other scientific men, it is classed as an active poison capable of speedily destroying life when taken in sufficient doses; and if taken pure or undiluted, it destroys the vitality of the tissues with which it comes in contact as readily as creosote or pure carbolic acid. When largely diluted with water, as it is in all the varieties of fermented and distilled liquids, and taken into the stomach, it is rapidly imbibed or taken up by the capillary vessels and carried into the venous blood, without having undergone any digestion or change in the stomach. With the blood it is carried to every part, and made to penetrate every tissue of the living body, where it has been detected by proper chemical tests as unchanged alcohol, until it has been removed through the natural process of elimination, or lost its identity by molecular combination with the albuminous elements of the blood and tissues for which it has a strong affinity.

The most varied and painstaking experiments of chemists and physiologists, both in this country and Europe, have shown conclusively that the presence of alcohol in the blood diminishes the amount of oxygen taken up through the air-cells of the lungs; retards the molecular or metabolic changes of both nutrition and waste throughout the whole system, and diminishes the sensibility and action of nervous structures, in direct proportion to the quantity of the alcohol present. By its strong affinity for water and albumen, with which it readily unites in all proportions, it so alters the hemaglobin of the blood as to lessen its power to take the oxygen from the air-cells of the lungs, and carry it as oxyhemaglobin to all the tissues of the body; and by the same affinity it retards all atomic or molecular changes in the muscular, secretory, and nervous structures; and in the same ratio it diminishes the elimination of carbon-dioxide, urea, phosphates, heat, and nerve force. In other words, its presence diminishes all the physical phenomena of life.

These direct effects of alcohol, as demonstrated by rigid experimental inquiries, are in perfect harmony with the phenomena presented by their use in all the grades and conditions of human society. The diminution of nerve sensibility, developed in proportion to the quantity of alcohol taken, may be seen in all stages, from simple exemption from all feeling of fatigue, pain and sense of weight as exhibited by ease, buoyancy, hilarity, etc., to that of complete unconsciousness and loss of muscular power. It is this anæsthetic effect of the alcohol that has led to all the popular errors and contradictory uses which

have proved so destructive to human health and happiness. It has long been one of the noted paradoxes of human action, that the same individual would resort to the use of the same alcoholic drink to warm him in winter, to protect him from the heat in summer, to strengthen him when weak and weary, and to soothe and cheer him when afflicted in body or mind. From the facts already stated in regard to the action of alcohol on the constituents of the blood and tissues, all this is easily explained. The alcoholic drink does not relieve the individual from cold by increasing his temperature, nor from heat by cooling him, nor from weakness and exhaustion by nourishing his tissues, nor yet from affliction by increasing his nerve force, but simply by diminishing the sensibility of the brain and nerves, and thereby lessening his consciousness of impressions of all kinds, whether from heat or cold, weariness or pain. In other words, the alcohol by its presence does not in any degree lessen the effects of the evils to which he is exposed, but directly diminishes his consciousness of their existence, and thereby impairs his judgment concerning the degree of their effects upon him. Well did the wise man of old say that "Wine is a mocker, strong drink is raging, and whosoever is deceived thereby is not wise."

I say then, as I have repeatedly said on other occasions, that from all the facts hitherto adduced, whether from accurate experimental investigations in different countries, from the pathological results developed in the most scientific societies, from the most reliable statistics of sickness and mortality, as influenced by occupations and social habits, or from the life insurance records kept on a uniform basis through periods of ten, twenty, thirty, or even forty years, it is clearly shown that alcohol when taken into the human system not only acts upon the nervous system perverting its sensibility, and if increased in quantity, causing intoxication or insensibility, but it also, even in small quantities, lessens the oxygenation and decarbonization of the blood and retards the molecular changes in the structures of the body. And when these effects are continued through months and years, as in the most temperate class of drinkers, they lead to permanent structural changes, most prominently in the liver, kidneys, stomach, heart, blood-vessels and nerve structures, and lessen the natural duration of life in the aggregate from ten to fifteen years. Consequently there is no greater or more destructive error existing in the public mind than the belief that the use of fermented and distilled drinks does no harm so long as they do not intoxicate.

Another popular error, but little less mischievous, is the opinion that the substitution of the different varieties of beer and wine in the place of distilled liquors promotes temperance and lessens the evil effects of alcohol on the health and morals of those who use them. Accurate investigations show that beer and wine-drinkers generally consume more alcohol per man than the spirit drinkers; and while they are not as often intoxicated they suffer fully as much from diseases and premature death as do those who use distilled spirits. Again, the beer-drinker drinks more nearly every day, and thereby keeps some alcohol in his blood more constantly; while a large percentage of spirit drinkers drink only periodically, leaving considerable intervals of absence, during which the tissues regain nearly their natural condition. The more constant and persistent is the presence of alcohol in the blood and the tissues even in moderate quantity, the more certainly does it lead to perverted and degenerative changes in the tissues, ending in

renal and hepatic dropsies, cardiac failures, gout, apoplexy and paralysis.

If the foregoing views regarding the effects of alcoholic liquids on the human system in health are correct, what can we say concerning their value as remedies for the treatment of disease? If it be true that the alcohol they contain acts directly upon the corpuscular elements of the blood, and so far diminishes the metabolic processes of nutrition and disintegration as to lessen nerve sensibility and heat production and favor tissue degenerations, their rational application in the treatment of any form of disease must be very limited.

And yet the same errors and delusions concerning their use in the treatment of diseases and accidents are entertained and daily acted upon by a large majority of medical men as are entertained by the non-professional part of the public.

Throughout the greater part of our medical literature they are represented as stimulating and restorative, capable of increasing the force and efficiency of the circulation, and of conserving the normal living tissues by diminishing their waste; and hence they are the first to be resorted to in all cases of sudden exhaustion, faintness or shock, the last to be given to the dying, and the most constant remedies through the most important and protracted acute general diseases. Indeed, it is this position and practice of the profession that constitutes at the present time the strongest influence in support of all the popular though erroneous and destructive drinking customs of the people. The same anæsthetic properties of the alcohol that render the laboring man less conscious of the cold or heat or weariness, also render the sick man less conscious of suffering, either mental or physical, and thereby deceive both him and his physician by the appearance temporarily of more comfort. But if administered during the progress of fevers or acute general diseases, while it thus quiets the patient's restlessness and lessens his consciousness of suffering, it also directly diminishes the vaso-motor and excitomotor nerve force with slight reduction of temperature and steadily diminishes both the tissue metabolism and excretory products, thereby favoring the retention in the system of both the specific causes of disease and the natural excretory materials that should have been eliminated through the skin, lungs, kidneys and other glandular organs. Although the immediate effect of the remedy is thus to give the patient an appearance of more comfort, the continued dulling or anæsthetic effect on the nervous centers, the diminished oxygenation of the blood, and the continued retention of morbid and excretory products all serve to protract the disease, increase molecular degeneration and add to the number of fatal results.

I am well aware that the foregoing views, founded on the results of numerous and varied researches and well known physiological laws, and corroborated by a wide clinical experience, are in direct conflict with the very generally accepted doctrine that alcohol is a cardiac tonic, capable of increasing the force and efficiency of the circulation, and therefore of great value in the treatment of the lower grades of general fevers. But there have been many generally accepted doctrines in the history of medicine that have proved fallacious. And the more recent experiments of Prof. Martin, Sidney Ringer, and Sainsbury, Reichert, H. C. Wood, and others have as clearly demonstrated that the presence of alcohol in the blood as certainly diminishes the sensibility of the vaso-motor and cardiac nerves in proportion to its quan-

tity until the heart stops paralyzed, as that two and two make four.

After an ample clinical field of observation in both private and hospital practice for more than fifty years, and a continuous study of our medical literature, I am prepared to maintain the position that the ratio of mortality from all the acute general diseases has increased in direct proportion to the quantity of alcoholic remedies administered during their treatment. How can we reasonably expect any other result from the use of an agent that so directly and uniformly diminishes the cerebral, respiratory, cardiac, and metabolic functions of the living human body? Both the popular and professional beliefs in the efficiency of alcoholic liquids for relieving exhaustion, faintness, shock, etc., are equally fallacious. All these conditions are temporary, and are rapidly recovered from by simply the recumbent position and free access to fresh air. Ninety-and-nine out of every hundred of such cases pass the crisis and begin to revive before the attendants have time to apply any remedies, and when they do not, the sprinkling of cold water on the face and the vapor of camphor or carbonate of ammonia to the nostrils are the most efficacious remedies, and leave none of the secondary evil effects of brandy, whiskey, or wine. Indeed, whenever a person affected by sudden exhaustion or syncope is able to swallow wine or whiskey, he is in no immediate danger of dying; and yet the recovery is always attributed to the last remedy given, even though its real influence may have been injurious to the patient. Nothing could more clearly demonstrate the power of alcohol to paralyze both the respiratory and cardiac organs than the experiments detailed by Dr. H. C. Wood, in his address to the recent International Medical Congress at Berlin on the subject of anæsthesia.

But without further taxing your patience with the details of investigations and statistical results, I will answer three of the questions proposed for discussion by this assembly, by saying:

1. That alcohol is a poison; or, in the words of Dr. Joseph Frank Payne, Vice-President of the Pathological Society of London, that "the action of alcohol on tissue or tissue elements is threefold—(1) as a functional poison; (2) as a tissue poison or destructive; (3) as a checker of oxidation."

2. That alcohol is in no proper sense a food, either direct or indirect.

3. There are no proper or necessary uses of alcohol as a medicine, except by the chemist and pharmacist in the manufacture and preparation of drugs. It is true that a physician can make the anæsthetic properties of alcohol available for the temporary relief of pain and the induction of sleep, but it is equally true that he has many other remedies more efficient for those purposes and less objectionable than the alcohol; consequently, the use of the latter is neither necessary nor proper.

I wish to say further to the members of that most important and humane profession, in whose ranks I have diligently labored for more than half a century, that if you, one and all, will patiently and boldly verify the truth of these several propositions as I have done, by acting in accordance with them at the bedside of the sick, you will not only soon realize a marked diminution in the ratio of mortality from all those diseases for which you have heretofore prescribed alcoholic liquors, but by uniformly characterizing such liquors as depressing, paralyzing, and poisonous, instead of stimulating and tonic whenever

they are alluded to, you will save many thousands from death annually, and do more towards banishing the terribly destructive habit of liquor-drinking from every circle of human society in one decade than has been accomplished by legislation in a century past. By thus quietly and persistently designating all the various fermented and distilled drinks simply as diluted poisons capable of impairing cerebral and nerve sensibility, muscular force, metabolic tissue changes, and secretory activity, in proportion to the quantity taken, you will more rapidly and effectually educate the people correctly on this all important subject than can be done by any other agency. You, more than any other class of persons, have free access to the individuals and families of every grade of human society. It is to you that all classes look for guidance in all matters relating to the preservation of health and the prolongation of life. Not only the common language you use in relation to alcoholic liquors, but your individual practices also, are capable of exerting a mighty influence over the maxims and habits of all other classes. And it must be remembered that in proportion as the influence of your precepts and your practices is great, so is your individual responsibility for actively exerting that influence in the right direction.

CHLOROFORM AND ITS ACCIDENTS.—In reference to the recent increase in the number of deaths during the administration of chloroform, Mr. Alfred Hy. Mason, Agent for the Warrington Chemical Company, writes:

"It is not in my province to discuss any particulars in reference to the increased mortality in cases where chloroform has been administered. All manufacturers are more or less interested in such cases; but there is little doubt in my mind that all the chloroform which is manufactured in this country is chemically pure, in so far that it answers to all the requirements of the "British Pharmacopœia," and is certainly suitable for anæsthetic purposes when it leaves the manufacturer; but I wish to lay down definitely the fact that when once such an article has been handed to the distributor, the responsibility of the manufacturer ceases absolutely. It is the custom with most of the authorities of infirmaries, and such institutions, to send out tenders for their half-yearly supplies of drugs; amongst these chloroform is named. After prices are approved, an order is given at once for the whole six months' supply. An average order for a fair-sized institution would be about twelve Winchester quarts of chloroform. When required for use, one of these bottles is put upon the dispensary shelf, and used indiscriminately for all purposes, as the dispenser has calls for it."

He suggests that in every case where an anæsthetist requires chloroform, he insists upon having an unopened quarter of a pound bottle, with the manufacturer's label and band upon it, takes from it what he requires for the operation, and gives instructions for what remains in the bottle in every instance to be used up in the dispensary for other purposes. Such a bottle of pure chloroform would cost 1 shilling at the outside, bottle included; and this arrangement, if carried out, would be a protection to the manufacturer, and give the operator better assurance and security that no change could possibly have taken place in the chloroform, either from lengthy exposure or frequent unstoppering of the bottle.—*Hospital Gazette*.

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ALCOHOL IN MEDICINE.

THIRTY years ago alcohol was one of the most popular and trusted remedies in medicine. To-day it is regarded with great suspicion and doubt. Ten years ago several eminent men in both Europe and this country began to question the value of alcohol, and to demand some reasons for its use in disease. A reaction followed, which has been gathering force and increasing up to this time. To-day all scientific study agree on this fact: that alcohol is an anæsthetic; beyond this all is confusion and doubt.

Laboratory theories and clinical experience vary widely. Diseases in which alcohol was thought to be an essential remedy, recover as quickly without alcohol and by the use of other means.

Many excellent practitioners assert that the mortality is less, and the convalescence more certain, from non-alcoholic treatment. This experience is increasing in all directions among the active working men of the profession, and is the result of observation, above all sentiment or temperance influence. In England it has developed into a temperance hospital, in which alcohol is rarely used as a medicine. It is seen in the withdrawal of spirits as medicine in most of the workhouse hospitals, and the formation of a medical society to study the use and abuse of alcoholic remedies. In this country this same doubt of the value of alcohol has at length been organized into the Medical Temperance Society, which originated at Washington last May. These are the unmistakable hints of a great advance in scientific medicine. The experience and theories of the past are questioned; and if they are truths, abundant evidence will sustain them above all public opinion. If not, doubts and errors will increase with each advance of accurate study.

As a purely medical question, the position of alcohol and its value as a remedy is full of uncertainty and doubt. The Medical Temperance Society lately held a two-days' session, at Staten Island, to discuss this question of alcohol and its value. Dr. N. S.

Davis, of Chicago, Ill., was President, and thirty-one papers were read and discussed. This was the first medical gathering to study this subject exclusively, ever held in this country. As it was to be expected, extreme views on both sides were defended. In a true scientific spirit, there was no restriction of personal opinions. One reader affirmed that alcohol was a "pure stimulant;" one declared it to be "the prince of tonics;" another urged its food value; another showed, from chemistry, that it was part of the body, and essential to health; another proved its great medical value in many diseases. On the other side, all these claims were denied, and the danger and worthlessness asserted with great energy. While a number of papers were read taking extreme views on both sides, the best sense of the convention was apparent in a number of thoughtful inquiries which asked the question, Why should alcohol vary so widely in its effects if it had medicinal value? Why should clinical facts so signally fail to sustain the theories which are urged to explain its physiological action? These and other clinical problems were offered, suggesting new and broader studies, and indicating that the entire question of alcohol in medicine was still unknown. This very confusion of practice and theory in the profession has aroused up the laity to discuss the subject, and take sides in societies and parties.

Nothing reflects more on medical men, who, instead of studying the subject and teaching the public, join themselves to parties and societies and defend the views of unreliable enthusiasts. It is equally reprehensible to defend old theories as settled facts and denounce others who disagree. A sad exhibition of this appeared in the *Medical Record*, in the editorial "On the Staten Island Meeting," naming it a "Fanatical Congress." After calling attention to some principles urged by Dr. Davis, of Chicago, it declared these to be "absolutely untrue;" then asserted that alcohol was a food in its "broad and rightful sense," and those who denied this were either ignorant or untruthful. Any general reading would have shown the writer of this editorial that many able and thorough scientific students had reached an exactly opposite conclusion, from evidence equally certain and entitled to the same credence. To accuse any one of fanaticism and dishonesty, who doubts the value of alcohol, is a serious charge for a medical journalist of this age, and reflects the suspicion of the same offence in the author. Dogmatism among medical men is deplorable, and dogmatic assumptions that alcohol is or is not of any value in disease is very unscientific, to say the least. The Staten Island meeting is only the beginning of an organized inquiry and effort to ascertain the facts concerning alcohol.

Of necessity the first studies will lack in accuracy and have a certain positivism that springs from imperfect knowledge. The critics who condemn all such efforts, deserve more pity and sympathy for their lack of knowledge than the enthusiasts.

As in all other questions the truth cannot be reached except from accurate study, not of theories or assertions, but of cases and clinical experience. Use pure spirits, reduced by water, in clearly defined cases,

where its value has been asserted; then treat the same cases without it. Under the same conditions, experiment with healthy men, using spirits a certain definite time, and so on until the evidence has accumulated beyond all theory and speculation. Second-hand opinions of foreign authorities, and assertions of men prominent in the profession, are of no value except as hints, to be confirmed or denied from experiments which every physician can make for himself. If the conclusions of any observer are veritable facts, almost every physician can prove them beyond question. The great demand of to-day is a new study of the entire subject from a purely scientific point of view. The Medical Temperance Society has begun this work, and earnestly appeals to the entire profession for aid; not for theories, but facts and conclusions, based on clinical experience, which can be tested by every one. The profession must answer the public question: Has alcohol any food or medicinal value? clearly, conclusively and above theories and dogmatic assumptions.

D. D. CROTHERS, M.D.

Book Notices.

ADDRESSES: Papers and Discussions in the Section of Obstetrics and Diseases of Women at the Forty-second Annual Meeting of the American Medical Association, at Washington, D. C., May 5-8, 1891. Printed at the office of the Association. Chicago. 1891.

MINOR SURGERY AND BANDAGING, Including the Treatment of Fractures and Dislocations, Tracheotomy, Intubation of the Larynx, Ligations of Arteries and Amputations. By HENRY R. WHARTON, M.D., Demonstrator of Surgery and Lecturer on Surgical Diseases of Children in the University of Pennsylvania, etc. In one very handsome 12mo. volume of 491 pages, with 403 illustrations. Enamelled cloth, \$3.00. Philadelphia: Lea Brothers & Co. 1891.

The author's large experience in practice and teaching assures not only the completeness and authority of his work, but also the presentation of its matter in a form readily grasped. The book is exceptionally rich in illustrations, a notable feature being achieved by those in the section on bandaging, which are direct photographs from the living model. Modern surgery is well represented, as is indicated by the full directions given for the preparation and application of antiseptic dressings. Dr. Wharton has more than fulfilled the promise of his title by including the treatment of the most important emergencies. The volume is therefore not only a valuable instructor and guide for students and nurses, but it is well worthy of a convenient place on the practitioner's table, in view of the prompt advice it will afford in the large variety of emergencies which may require his attention.

THERAPEUTICS: Its Principles and Practice. By H. C. WOOD, M.D., LL.D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania. The eighth edition of A Treatise on Therapeutics, rearranged, rewritten and enlarged. J. B. Lippincott Company. Philadelphia and London: 1891. Cloth, \$6.00.

As in former editions, so in this, Dr. Wood took special pains to make this book a treatise "up to the time." Among new articles we notice the whole subject of anæsthetics, articles upon cocaine, strophanthus, caffeine, hydrastine, paraldehyde, lead poisoning,

sulphonal, aristol and chloralamid, and others. Dr. Wood has succeeded in presenting to the profession a book on therapeutics which keeps abreast of the times, and undoubtedly is second to none.

Pamphlets.

Artificial Modifications of Climate. By Dr. Samuel Wolfe, Professor of Physiology of the Medico-Chirurgical College. Reprint from the *Annals of Hygiene*, August, 1891.

Report of Committee on Ophthalmology and Otology. By Geo. H. Powers, M.D., Professor of Ophthalmology and Otology, Medical Department University of California, Chairman. Read before the Medical Society of the State of California. April 21, 1891. Reprint from *Pacific Medical Journal*.

The Medical Digest.

COCAINE AND ANTIPYRIN COMBINED AS A LOCAL ANÆSTHETIC.—Dr. E. Stuver (*Hygiea*), praises a solution of five parts of cocaine and fifteen parts of antipyrin in one hundred parts of water as a very efficacious local anæsthetic for minor surgical operations. The action of this mixture he states to be more intense and lasting longer than that of cocaine alone. It has also been successfully employed in cases of obstinate vomiting.—*Cincinnati Lancet-Clinic*.

RESECTION OF THE APEX OF THE LUNG.—M. Tuffier presented to the Surgical Society of Paris, a patient upon whom he had performed resection of the apex of the lung. It was affected with tuberculosis, the lesion appearing to be limited to that portion. The operation was performed by a simple incision through the intercostal space. The apex was drawn into the wound, and then resected by a ligature; and to avoid too great traction the borders of the pulmonary wound were united to the incision. The patient recovered without the least complication.

—*Journal de Medicine*.

UNCONTROLLABLE VOMITING OF PREGNANCY.—Drs. Henske and Gottschalk have found menthol efficacious in stopping the uncontrollable vomiting in pregnancy. Fifteen grains are dissolved in five ounces of distilled water, to which five drachms of rectified spirits are added. A tablespoonful of this mixture is given hourly till the vomiting ceases. The editor of the *Archives of Gynecology* states that he had an opportunity of trying the efficacy of this mixture. Vomiting ceased after the fourth tablespoonful. Dr. Gottschalk reports two cases with similar results.

—*British Medical Journal*.

IRRITABLE HEART.—The treatment for muscular feebleness must include a liberal allowance of rest, alternated with regular—not severe—exercise. We would be afraid of Oertel's method of mountain-climbing, which he so strongly advises for weak hearts, preferring, on the contrary, more moderate exercise. As therapeutic agents for this condition, nux vomica, ergotine, and the chloride of barium in pill form have given us the most satisfactory results. A very good formula for the above is the following:

R.—Ferri sulph. exsic. 3iiss.
Ext. nucis vomicæ. gr. xliij.
Ergotine 3iiss.
Barii chloridi gr. x to xx.
M.—Fiat pil. No. 50.
Sig. One after each meal.

—Martin, *Kansas Med. Jour.*

OINTMENT FOR HEMORRHOIDS.—Audhoui recommends the following ointment for hemorrhoids :

R.—Extract of belladonna.....	15 grs.
Extract of thebaia.....	15 grs.
Antipyrine.....	45 grs.
Mercury ointment.....	2½ drs.
Simple cerate.....	1 oz.

This is to be made into an ointment and applied to the inflamed hemorrhoids. Rectal injections of warm water are to be employed if there is constipation.

—*Medical News.*

TREATMENT OF RHUS POISONING WITH IPECAC.—Dr. W. S. Gilmore, of Sorgho, Ky. (*in Country Doctor*), recommends the following with confidence, having used it for six years without a failure :

R.—Ipecac pulv.....	3 iij
Aquæ.....	1 pint.

M.—Sig. Apply freely to the affected part every three hours.

The heat, itching and pain are relieved as if by magic, and in the great majority of cases two or three applications are sufficient to produce a cure. The only difficulty that has been noticed is a slight cooking of the skin when the solution was too strong. That, however is easily obviated, as the weaker solutions seems as efficient as the stronger. He thinks it is as near a specific as we have in medicine.

—*Cincinnati Med. News.*

A NEW SUBSTITUTE FOR SANTONINE.—According to Dr. Coppola, santonine is not a true vermicide, its action on thread-worms being that of a convulsant only, causing movements very similar to those due to epilepsy. In this state, the worms are unable to co-ordinate their movements, and are easily expelled from the intestine by a purgative. Santonine also labors under other disadvantages—it is very easily absorbed by the mucous membrane of the gut, and it sometimes produces toxic effects. A much better vermicide is to be found in a compound of santonine, santoninoxyme, which he has recently prepared. This actually kills the worms, and is well borne in much larger doses than can be given of santonine. The best plan is to give, for two or three days, three times as large a quantity as is ordinarily prescribed of santonine, each dose being followed by a purgative.—*Hospital Gazette, London.*

FUNCTION OF THE TUBER CINEREUM.—Dr. Ott (*Journal of Nervous and Mental Diseases*, July, 1891) has two short papers on the function of the tuber cinereum. He believes that the thermotaxic and what is termed the "thermopolypnoëic" center are one and the same, and are situated at the anterior end of the third ventricle. A rabbit was heated to produce polypnoëa; the skull was opened and the tuber cinereum was damaged. It was always found that polypnoëa ceased when this was done, but not by any experiment in which it was uninjured. Ott also concluded that it had thermotaxic functions. He found that puncture of the anterior end of the optic thalami must break the tuber cinereum to cause a rise of temperature. He considers it established that the thermogenetic centers are the caudate nucleus, and according to Hale White the grey matter of the septum lucidum and the grey matter in front of and beneath the caudate nucleus. Ott believes that there are thermo-inhibitory centers about the concrete and Sylvian fissures and polypnoëic centers in the tuber cinereum.—*Supplement to the British Medical Journal.*

PROPHYLAXIS OF DIPHTHERIA.—Eliott, in the *Va. Med. Monthly*, says that he considers the different methods of prophylaxis, and advocates, as the best plan, the constant vaporization of turpentine in the house where diphtheria is present. Of the fifteen cases which the writer reports, in several families new cases developed where no turpentine was used; but in no family did a new case develop where the rooms were kept filled with the vapor of turpentine.

A similar result was obtained at the New York Infant Asylum, where the following formula was used :

R.—Ac. carbolicæ	3j.
Ol. eucalypti	3j.
Spt. terebinth.....	3viij.—M.

Add two tablespoonfuls to one quart of water in a pan with a broad surface, and maintain in a constant state of ebullition or simmering in the room occupied by the patient.—*Archives of Pediatrics.*

THE CAUSE AND CURE OF BALDNESS.—Baldness, like obesity, is one of those minor evils which could probably be much more thoroughly kept under control, if people would take more pains and begin earlier with their treatment.

Dr. M. Jos. Tyson, who writes upon idiopathic and premature baldness in the *Lancet* (London), makes some observations which quite corroborate this view. Thus he sums up the causes of baldness as : Insufficient exposure of the hair to the sun and air; close, ill-ventilated hats; excessive mental work and worry; the influence of heredity; venereal and alcoholic excesses; constant washing, and the neglect of using some oil or pomade. These causes vary in importance in different cases.

Children, he says, should, as much as possible, do without caps and hats, when worn should be of the lightest description. During the hot season a stouter hat is necessary for the prevention of sunstroke. A head covering should never be worn indoors, in trains, or in closed carriages. The kind of material employed is of importance. In summer and still weather, straw appears to be the best, on account of its lightness and permeability. In winter, hats made of light felt, well ventilated and unlined, are to be recommended. The ordinary tall hat, and the thick, heavy, unventilated top hat, cannot be too strongly condemned. Of course, nothing special can be said regarding hereditary or nervous influences. In concluding, however, he mentions a few minor points of treatment which should not be forgotten :

Too constant washing of the hair is unnecessary, as well as harmful; once a week is quite often enough for cleanliness, as well as for maintaining the strength of the hair. The same remark applies to constant brushing, for continual brushing, especially with hard brushes, should be avoided.

There is a common notion that greasing the hair is vulgar; so many persons fall into the other extreme, and never apply any pomade at all. After the hair has been washed, it is certainly beneficial to apply some form of simple grease or oil.

When the head-hair is becoming rapidly thinned, some stimulating material, such as ammonia and cantharides, added to the oil, will increase its good effects.

Dr. Tyson does not take into account one possibly important factor in causing baldness, viz., that of contagion. It has been held on good authority that many cases of baldness are parasitic, and due to micro-organisms gathered from unclean brushes and combs.

—*Medical Record.*

CANTHARIDES IN CANCER.—More than twenty years ago it was reported that the Russian peasants were in the habit of using some kind of beetle as a remedy for cancer. Since that time some observations have been made which would appear to point to the possibility of cantharides being of some use for this purpose. In 1860 Dr. Wilms excised the left breast for a tumor of the size of a small walnut, which was shown by the microscope to be a reticular carcinoma. It returned, and was again excised a year after the first operation. A mixture of tincture of cantharides and camphorated wine in mucilage was now prescribed, and was continued for three months. The patient, who was a widow at the time, afterwards married again, and gave birth to two children. She is still alive, and there has been no recurrence. Again, in 1880, a somewhat extensive cancer of the breast was operated on in the Augusta Hospital, after which the patient was treated with cantharides, and was known to have had no return of the tumor six years later; indeed she is believed to be alive and well at the present time. Once more, in 1879, a stricture of the œsophagus, evidently of a carcinomatous nature, developed somewhat rapidly in a female patient; she was treated with cantharides, and a decided improvement took place, so that she was able to swallow pieces of food if they were well masticated. She is alive still, but feels, however, some inconvenience from the stricture, and at times is obliged to have recourse to the cantharides.

—*Lancet*.

CYSTIC DISEASE OF FŒTAL KIDNEY IMPEDING LABOR.—Dr. Ehrhardt has recently described a case of cystic disease of the fœtal kidney impeding labor (*Nouv. Arch. d' Obst.*). A woman, aged twenty-three, was delivered at the eighth month of her second child. The fœtal heart sounds could be heard before labor; the abdomen of the mother was much distended. The head and the arms were delivered and found to be very œdematous. After prolonged traction the fœtus remained fixed. The maternal pelvis was normal. Distention of the child's abdomen was then detected by passing the hand into the uterus after decapitation and removal of one arm, and evisceration was attempted. The liver was removed; next a large friable tumor was drawn down; a few pieces were drawn off, and then small cystic degeneration of one kidney was diagnosed. This drawing down of the kidney allowed the remains of the fœtus to be delivered by gentle traction on the thorax. Small cystic degeneration of both kidneys was discovered. The spermatic plexus was slightly varicose. It was remarkable that the fœtus lived till delivery, since both kidneys were entirely degenerate and the heart diseased. The case shows the insignificant part played by the kidneys during intrauterine life, and refutes the theory which attributes the origin of the liquor amnii to the urine of the fœtus. One of the kidneys was just over, the other just under, five inches in vertical measurement. The success of drawing down one of the tumors must be remembered as a precedent. It diminished the transverse diameter of the fœtal abdomen, which was the sole cause of impediment to delivery.—*Brit. Med. Jour.*

USE OF HYOSCINE.—In a paper in the *Journal of Mental Science* Dr. Lionel Weatherly has a very strong word to say in favor of hyoscine in certain conditions. There is little doubt that his warning against mistaking it for hyoscyamine is not unnecessary, and it is now high time that it should be recog-

nised that in these two substances we have to deal with alkaloids of very different characters, from the point of view at least of the clinical physician. Dr. Weatherly believes strongly in the powers of hyoscine as a mental alterative. He has found it particularly useful in that form of mental disturbance which renders the patient violent and abusive, restless and domineering—a nuisance to every one who has anything to do with him. Under the administration of repeated small doses of hyoscine such a patient becomes a changed man. Violence and abusiveness give place to an amiable politeness, and instead of indulging himself in the free exercise of an extensive, if somewhat shady vocabulary, the patient subsides into silence. Those are the cases in which Dr. Weatherly finds the drug most useful, and in which he believes it acts as a true mental alterative. It is also, he says, a useful drug in delirium tremens, and in other diseases in which tremor is a marked symptom, such as disseminated sclerosis, and it has the great advantage of being in most circumstances quite safe. It is not without reason that Dr. Weatherly enters a word of warning against its indiscriminate use as a sudden and powerful hypnotic; yet there would appear to be no doubt that it finds its greatest, and probably its most useful, application in the treatment of maniacal violence and noisiness, and that, at least in ordinary hospital work, it is a drug for emergencies.—*Lancet*.

ICHTHYOL VARNISH.—Unna, who has made extensive use of ichthyol in the form of ointments, pastes, ichthyol-collodion and ichthyol-gelatine recognized the need of an ichthyol varnish that would not have the disadvantages of the collodion and gelatine in being somewhat irritating to an abraded skin, and that would not possess the hygroscopic qualities of the pure drug. He believes that a good many specialists have been less successful in the treatment of rosacea and lupus erythematosus with ichthyol, because they have used the drug in the form of ointments and pastes.

For this purpose he experimented with various substances, and found that if starch were added to ichthyol the mixture was not hygroscopic, and that to this mixture albumen must be added in order to keep the starch in suspension. The formula for this ichthyol varnish reads:

R.—Ichthyol.....	40 parts.
Starch.....	40 “
Sol. albumen.....	1-1½ “
Water, ad.....	100 “

The starch is first thoroughly mixed with the water, then the ichthyol added and lastly the solution of albumen. Another formula in which carbolic acid is incorporated is:

R.—Ichthyol.....	25 parts.
Carbolic acid.....	2.5 “
Starch.....	50 “
Water.....	22.5 “

This varnish is intended especially as a dressing in minor surgery, as it dries quickly, and can easily be removed by water. The soluble ichthyol varnish combines all the advantages of the various ichthyol preparations without their disadvantages. It dries quickly and is not dissolved by the perspiration. It is valuable in acne in persons with a very sensitive skin, in rosacea, and in lupus erythematosus. In some forms of eczema and in erysipelas it is of great service.

This varnish is also made the vehicle for other drugs, on the principle that several therapeutic agents of the same class may, with advantage, be united in one prescription. In this way a more powerful effect may be produced, while the disadvantages of the several drugs are lessened. For examples, 2 to 5 per cent. of chrysarobin may be added to the ichthyol varnish for use upon the face, and used with the same security as chrysarobin collodion. Certain circumscribed forms of eczema, psoriasis and other affections may be treated by combining pyrogallol, resorcin and sulphur with the ichthyol varnish. It is to be noted that in order to obtain a suitable consistency, an amount of water or oil, equal to that of every new medicament added, should be mixed with the varnish. For this purpose linseed oil is used as a rule.

—*Boston Med. and Surg. Journal.*

VARICOSE ULCERS.—For the treatment of varicose ulcers of the leg and moist eczema, J. Braun recommends a 10 per cent. lanoline zinc ointment according to the following formula:

R.—Zinci oxidi..... 3iss.
Lanolin..... 3xi.
Ungt. emollient..... 3iv.—M.

The emollient ointment consists of:

R.—White wax..... 1 part.
Spermaceti..... 2 parts.
Almond oil..... 8 "
Rose water..... 2 "

so that it resembles cold cream. The lanoline zinc ointment is applied spread on linen, and the patient is ordered to keep in bed till the ulcer has granulated over. The application is renewed more or less frequently, according to the condition of the ulcer. Against eczema of the scalp, the author uses an ointment prepared as under:

R.—Hydrarg. præcip. alb..... 3j.
Ungt. emollient..... 3ij.
Lanolini..... 3vij.

The latest remedy against the stings of bees, wasps, mosquitoes and the like is to rub the affected parts with a solution of sea salt. Swelling and pain disappear immediately, and, indeed, do not manifest themselves if the application be made immediately after the sting or bite.—*Ex.*

SPLENIC ABSCESS OPENING INTO BOTH THE LUNGS AND THE BOWEL.—An interesting case of abscess of the spleen is related in *La Crónica Médica*, a Peruvian journal, which occurred in the Lima Hospital under the care of Dr. R. Quiroga y Mena. The patient was a lad of sixteen, who had been suffering from attacks of malarial fever, which had been followed by enlargement of the spleen, of which the patient was conscious. In this condition he had a fall from his horse, striking his left side against a stone. He was brought into hospital on September 3, 1890, and when examined the next day was found to have the signs of pneumonia of the left base, together with a large fluctuating tumor of the spleen; the pulse and respiration were somewhat rapid, and the temperature 39.5° C. It was decided to aspirate the following day. However, during the night the patient had two violent attacks of coughing, bringing up large quantities of puriform matter of a dark color like the dregs of wine, which appeared to have come from the spleen, as the tumor, which had measured about three and a half inches by two and a half inches, had completely disappeared. The patient, too, seemed quieter and better generally, and the proposed operation was

abandoned as needless. A blister was, however, applied, and a tonic mixture ordered. The next night a stool was passed containing purulent matter of the same color as that evacuated by the mouth. During the next three months this matter continued to be discharged both through the respiratory passages and by the bowels, setting up at times a certain amount of diarrhœa. After that there was great improvement, both discharges gradually ceasing, and the patient was able to leave the hospital about eighteen weeks after admission, quite recovered.

—*The Lancet.*

TREATMENT OF REDUCIBLE HERNIA BY ALCOHOLIC INJECTIONS.—The original *modus operandi* of Schwalbe, who introduced this form of treatment in 1871, is slightly modified by Dr. Steffen, of Regensburg (Zurich). A 70 per cent. solution of alcohol was used, and from two to four grammes of this fluid were injected round the sacculus herniosus (hernial sac) after reposition of the hernia. The treatment was ambulatory; first one or two injections a week were made, then at greater intervals. Before being dismissed from medical supervision the patient had to go without the truss which he used during the treatment. The time of treatment varied from one month to two years and a half, or more. In 293 cases there were 83 (62 per cent.) cures, 6 (48 per cent.) improvements, 9 (9 per cent.) of negative results. A cure was considered to have been obtained when, at least one year after dismissal of the patient, the hernia was neither to be seen nor felt during coughing or under intra-abdominal pressure, and when the patients, most of whom belonged to the laboring class, had been at their work for six or seven months. In 10 per cent. of the cases dismissed as cured the hernia returned, owing to various causes. The age of the hernia (*sic venia verbo*) was not without influence as to the result obtained, as will be seen from the following list:

Duration of disease.	No. of cases.	No. of cures.	Percentage.
Hernia incipiens.....	11	11	100
Date, a few days.....	10	10	100
Under ½ year.....	44	41	93.2
“ 1 “.....	45	41	91
“ 10 years.....	120	101	84.2
“ 30 “.....	52	34	65.4
Over 30 “.....	5	4	80
Date unknown.....	6	3	50

Dr. Steffen comes to the following conclusions: About four-fifths of small and medium-sized reducible herniæ can be cured, the wearing of a truss becoming in many cases superfluous. The prognosis improves the younger the individual, and the shorter the time the hernia has existed. Incipient cases should therefore be treated by injections, and not left to the chance of a spontaneous cure under a truss. Ambulatory treatment, with pauses of from four to seven days, gives better results than daily injection whilst keeping the patient in bed. In most cases the patient does better to continue his usual occupation, wearing a truss during the time of treatment. This method is also adapted to herniæ which cannot be retained by a truss, the latter being able to be worn, and keeping back the hernia after a course of treatment. In a few cases only toxic effects (alcoholism, urticaria, vertigo) were observed. This method of treatment is not entirely without danger; but accidents will be rare if due care is taken and regard paid to the anatomy of the respective parts. For particulars I must refer to Dr. Steffen's paper in Nos. 12 and 13 of the *Correspondenzblatt für Schweizer Aerzte*.

—Zangger, *Lancet*.

THE APPLICATION OF MEDICINE THROUGH THE SKIN BY ELECTRICITY (CATAPHORESIS).—At the last meeting of the Richmond, Va., Academy of Medicine, Dr. Hunter McGuire read an interesting paper on the "Application of Medicine to the System Through the Skin by the Aid of Electricity." He stated that he had experimented with goitre, and his experiments had demonstrated that iodine and cocaine could be absorbed by the glands, and the size of the tumors reduced, if not wholly cured. The latter could be done, he thought, if the applications were made when the tumor first appeared. Goitre is the abnormal swelling of the thyroid gland, and the malady is peculiar to women especially. In Switzerland, perhaps, there are more sufferers from goitre than any other part of the world, but in all countries it can be found. Men are but seldom afflicted with it.

Another strange feature of the swelling is the fact that the use of the thyroid gland has never been determined. It has been for years a mooted question in medical literature as to the utility of the gland. No scientist has ever settled the matter satisfactorily.

Dr. Shields reported three cases that he had cured by electricity. The cases had not been of long standing. He stated that he had used neither iodine nor cocaine, and regarded the treatment as a great step forward in medical science.

By this process some medicines can be conducted unchanged to the organ affected, and physicians have a better assurance of their action than if the drugs were administered by the roundabout way of the stomach.

Dr. M. D. Hoge, Jr., expressed the idea that the method could be employed by dentists so that teeth may be extracted without pain. Dr. McGuire said that cocaine administered by electricity was not dangerous, but would often prove so when taken through the mouth.—*Med. Summary.*

INJURIOUS EFFECTS OF THE MANUFACTURE OF MELINITE.—During the last year or so several cases have been admitted to the Marseilles hospitals of poisoning during the manufacture of the new explosive, melinite, one of which recently formed the subject of a paper read to the local medical society by MM. Regnault and Sarles. The patient was a young man, whose earliest symptoms were a prickling sensation in the eyes and loss of appetite; afterward there were fits of coughing, but no hæmoptysis, which, however, frequently occurs in these cases. The man was admitted into the hospital complaining chiefly of the cough and of fits of choking. His work had been to pour carbolic acid into nitric acid in order to manufacture picric acid, and he had, consequently, been constantly breathing nitrous acid fumes, and probably also picric acid volatilized by heat. The fits of dyspnoea lasted about ten minutes, and were accompanied by spasm of the glottis, the lips becoming quite purple, the number of respirations amounting to 56 a minute. During the attack the pulse was small and difficult to count, but was not above 65. Sibilant and sonorous rhonchi were heard, especially over the bases, at all times, but they were more marked during the attacks, which came on at intervals of from thirty to forty-five minutes. Shortly after admission, while the influenza epidemic was at its height, broncho-pneumonia came on, and the man died, this being the only case of poisoning by melinite manufacture which proved fatal, all the others recovering with rest. At the post-mortem examination, besides the lesions due to

the broncho-pneumonia, evidences of parenchymatous nephritis were found, which appeared to have been due to the poison. Picric acid was detected in the liver, as it had been, indeed, in the urine during life.—*Lancet.*

ON THE CONVALESCENCE OF SCARLATINA.—Dr. Chenet (*Revue Générale de Clinique*) says that he finds—as many will who inquire—the widest kind of difference about this matter. Some doctors are in favor of keeping such cases in bed as long as possible, three weeks often, and six weeks in the house is a common rule; but the author finds it better to begin early with rubbing the body with fatty substances, and as soon as desquamation commences to give baths; then as soon as the skin peeling is over to let them go out. The modern idea is that albuminuria is an infectious phenomenon, which can be prevented by re-establishing as quickly as possible the function of the skin. The fear of catching cold is correct in principle in these cases; but is confinement the best way to prevent this? Many think not. The child that is left alone for a single instant may throw off its coverings, or its bed may be placed near a door, in the draught. If it is up it may play about near the windows, and in all these cases catch cold, which may bring on nephritis; would it not be better to hasten the return of the skin function and get these cases out quicker? The author gives cases in which he commenced on the eighth day to use friction with *borated vaseline*, and commenced baths in third week. Three grains of calomel were given daily all through the case and milk was used as food. About contagion: the author inclines to the opinion that it is most dangerous during the peeling of the skin, and that the antiseptic ointment he uses helps to prevent the persons around the patient taking the malady. An antiseptic mouth-wash and throat gargle is also necessary. The giving of baths as soon as possible, then, is indicated, and they may or should be antiseptic. Isolation, the author thinks, is useful, but not sure at all, as cases of contagion from patients three months after convalescence are given, and surely they cannot be kept isolated so long.

—*Archives of Pediatrics.*

AN EASY METHOD OF PLUGGING FOR EPISTAXIS.—Dr. A. A. Philip describes a ready method of plugging the posterior nares, which, in his hands, is both effectual and easily accomplished.¹ A piece of old, soft, thin cotton, oiled silk, or silk, about six inches square—a piece of an old handkerchief will answer—is taken, and, by means of a probe, metal thermometer-case, or pen-holder, pushed, "umbrella" fashion, into the nostril, the direction of pressure, when the patient is sitting erect, being backward and slightly downward. It is pushed on until it is felt that the point of the "umbrella" is well into the cavity of the naso-pharynx.

The thermometer-case is now pushed on in an upward direction, and then toward the sides, so as to push more of the "umbrella" into the pharynx, and then withdrawn. The closed end of the sac protrudes well into the pharynx, and its open end protrudes at the anterior nares. The inside of the sac may be brushed with some astringent, such as alum or turpentine.

A considerable quantity of cotton-wool is pushed well back to the bottom of the sac in the pharynx. Then—the thermometer-case being held well against

¹ *British Medical Journal*, July 18.

the packed wool—the mouth of the sac is pulled upon, and thus its bottom is drawn forward and forms a firm, hard plug, wedged into the posterior nares. The sac may now be packed full of cotton-wool—dry, or soaked in some astringent solution. The mouth of the sac is tied just outside the nostril, trimmed with scissors, and the ends of the thread secured outside.

In removing the plug, open the mouth of the sac, and, with small dressing-forceps, gently remove the cotton-wool bit by bit. If there is bleeding, simply syringe the sac with weak carbolic lotion, or Condy's fluid, and repack with clean cotton-wool. If there is no bleeding when the wool is picked out, gently pull out the sac; or, if it adheres to the mucous membrane of the nostril, apply a little warm water, when it may easily be removed.

By this method no damage is done to the floor of the nose or back of soft palate by strings, etc., no disagreeable hawking, coughing, or vomiting takes place during introduction, and no disagreeable strings are left hanging inside the mouth.

—*Boston Med. and Surg. Jour.*

TREATMENT OF ULCERATED SCARLET FEVER AND DIPHTHERITIC THROATS BY IRRIGATION.—I have used the following method of treatment in the ulcerated throats of scarlet fever and diphtheria in the Birmingham City Hospital for about two years and a half. The appliances necessary are a small India-rubber bag syringe, 4 or 6 ounces, according to the size of the patient, two small basins and a towel. The medicament used is boric acid dissolved in hot water (about 105° F.). In order to facilitate the solution of the boric acid, I have a saturated solution in glycerine, of which the following are the proportions: Powdered boric acid, 4 parts; glycerine (sp. gr. 1,260), 3 parts. The glycerine should be heated by steam, and the boric acid (best quality, carefully powdered) stirred in till the solution is perfect. Of this solution, a large tablespoonful is dissolved in about a pint of hot water. The method of procedure is as follows:

Place the patient sitting up, or, if too weak to sit up, place him on his side with his face over the edge of the pillow. Apply the towel round his neck to keep him dry if any water accidentally gets spilled; withdraw the nozzle from the syringe before filling it and fill with the solution; replace the nozzle and direct the patient to open his mouth, then put it into the mouth well over the back of the tongue, and forcibly empty the syringe; at the same time receive the water which rushes out of the mouth and nose into the empty basin. In this way the mouth, fauces, pharynx, and in some cases the posterior and anterior nares are irrigated. The operation is repeated till the parts are washed quite clean.

In cases of purulent discharge from the nose or nasal diphtheria the same procedure is applied to the nostrils. The irrigation may be performed every two or four hours as circumstances require.

In this hospital during two years, over 1,500 cases of ulcerated scarlet fever and diphtheritic throats have been treated by this method.

From this experience I can recommend it as superior to any other I have tried. I believe its efficacy is due to the fact that it is founded on the rational principle of washing away of all septic discharges with a non-irritating, non-poisonous fluid. It is not in any way disagreeable to patients, on the contrary, when the mouth is dry or foul, it is most comforting. The solution is rendered sweet by the glycerine, so

that only a small percentage of even very young children offer any objection to it. Occasionally children swallow some without any subsequent ill effects. It should be borne in mind that, in order to prevent any septic matter being sucked into the syringe, the nozzle should always be withdrawn when filling.

—*The Lancet.*

ON HOT INFUSIONS OF DIGITALIS IN THE TREATMENT OF PNEUMONIA.—During the past three months excellent opportunity has been afforded me to test the value of the treatment of pneumonia by means of large and frequently repeated doses of the infusion of digitalis, given early in the attack. The marked benefits resulting in a few cases thus treated last fall, suggested its great importance and bolder use. In twenty cases the treatment was commenced by the administration of ten grains of the mild chloride of mercury, together with a tablespoonful of the infusion of digitalis, given every hour as hot as the patient could drink it. In from six to ten hours profuse perspiration occurred in every case, followed in twelve cases by a normal temperature. In three instances the temperature, without the use of any antipyretic, dropped to 100°, in four to between 101° and 101.5°, and in one to between 103° and 105.5°. In no case was the temperature below 103° when first seen, and in all but one, it was ushered in by a direct rigor. In all the cases the characteristic rusty sputum was present, but its short duration showed clearly that the inflammatory process had been cut short.

The severest case was that of G. J., a laborer, aged thirty-two, in whom there was violent delirium from the outset. The patient having felt ill for nearly twenty-four hours, had a violent chill at 4.30 P. M., February 25. At 6 P. M. the thermometer showed a temperature of 105.5°; the pulse was 130. His attendants had him strapped to the bed. Crepitant râles were heard at the base and over the middle lobe of the right lung, anteriorly and posteriorly. The patient was given ten grains of calomel, followed in one hour and a half by a tablespoonful of a hot infusion of digitalis, the latter being repeated every hour, despite the fact the temperature at 11 P. M. had fallen to 103°, at 5 A. M. to 101°, and the pulse to 115, with a general improvement of all the manifestations of delirium. At 6 A. M. there was profound expectoration of rusty-colored sputum, that continued for twenty-four hours. On the third day the temperature returned to 105°; after active purging it fell rapidly. On the morning of the fourth day the pulse had dropped to 50, the temperature to 96°. The infusion of digitalis was discontinued, and a combination of camphor, strychnine, and quinine given. Convalescence was rapid, and just ten days after the beginning of the attack the patient was up and about. The loss of weight in this short attack was remarkable. At the beginning of the attack the man weighed about 168 pounds; on March 7 he weighed 144½—a loss of 23½ pounds.

That hot infusion of digitalis acts quickly upon the cardiac muscle that forces the blood through the affected area, and thus to a marked degree overcomes the dyscrasia, is probably the *rationale* of the action of the drug. The use of a large dose of calomel, by reducing the consistency of the blood, takes the place of the old-time method of bleeding.

In the twenty cases treated, no ill results followed these large doses of digitalis. However, it would be advisable to watch the circulation; in case of a sudden lowering of the pulse-rate, the infusion should at once be stopped, for this is an indication that the de-

sired effect of the remedy has been obtained; should slow pulse and low temperature persist, nothing will stimulate better than camphor, quinine, and strychnine, in quantities suitable to the case. Alcohol was not used until the temperature had subsided. In none of the cases was the so-called standard remedy, carbonate of ammonia, used.—Hershey, *Med. News*.

DIFFERENTIAL DIAGNOSIS OF ACUTE FOLLICULAR PHARYNGITIS AND DIPHThERIC PHARYNGITIS, WITH TREATMENT.—It seems to me proper that a more careful study of these diseases should be made, so that error of diagnosis may not mislead the physician and horrify the patient. There can be no excuse for a physician to call follicular pharyngitis cynanche maligna for the sake of a little glory in being able to cure diphtheria in two or three days; for I have known cases where it was supposed diphtheria was present, when in reality it was only follicular pharyngitis, and *vice versa*, pharyngitis was supposed to be present when, in fact, diphtheria was developed; and valuable time may be lost where the physician is uncertain and decides that the next twenty-four hours will develop the disease sufficient to determine.

The diagnosis of the disease is of first importance, then the proper selection of the remedies. We certainly have made progress in the treatment of these diseases in the past twenty-five years, and homœopathy can claim her share of reward in her results. Whether high, low, or medium doses are to be used will have to be determined by each prescriber. I shall only point out the remedies that are the most useful, and then let the individual prescriber choose the strength of his remedies to be administered.

It is always well to bear in mind that diphtheria is a specific constitutional disease, manifesting itself in the pharynx and surrounding parts generally, and also remember the exudations and secretions are of themselves septic and toxic, therefore local treatment is important.

Acute catarrhal pharyngitis may commence in a chill, followed by fever, fullness of throat, and enlarged sub-maxillary glands, the mucose membrane over the tonsils congested, the uvula enlarged, and the pharyngeal glands enlarged, exuding a yellow mucus, sometimes in spots, and then again flowing down the pharyngeal walls. This is a catarrhal trouble, and does not depend always upon an epidemic of diphtheria to produce it. It is, to a certain extent, contagious, for I have had as many as twenty cases at one time in boarding-schools.

If a bent probe with a swab of cotton is used, it will be found the exudation *can be wiped off*.

In the initial stage, acon., bell., merc.-proto., lachesis, kali-bicrom. will be indicated internally; hammamillis, bi-car. soda (saturated solution), as gargle. After exudation takes place, kali-bicrom., weak solution, as gargle. If the latter is swallowed a little nausea may follow, which is not detrimental. The third day generally sees the patient on the road to recovery.

In looking for diphtheria locally, the first evidence we have of this specific constitutional poisoning is a passive hyperæmia; then an excess of mucus, producing a cloudy appearance of the epithelium, having the appearance of a veil over the point of exudation, showing the first exudation is into the epithelium. *This cannot be wiped off*, characterizing this from acute pharyngitis, the exudation of which *can be wiped off*. The cells of the deeper structure soon become involved, and then we may have the

yellow or white patches, or grey exudation of a leathery character, which *can* be removed, leaving a raw surface; and the second formation may be more tenacious than the first. When the rapid exudation into the epithelium takes place, or the lymphatics are obstructed, and the blood is cut off, then we have death in these parts, or gangrene, and may involve tissues other than the mucous or sub-mucous layers.

In the epithelium stage of diphtheria the following treatment may be indicated: Eucalyptus oil, 1 part; alcohol, 20 parts; as gargle every hour. If pain in throat, ice-bag may be applied to throat, cold milk and brandy every hour, and ice to swallow—if desired; internally, merc.-proto., lachesis, kali-bicrom., carbolic acid.

In the membranous stage, constant use of steam, hot fomentations to throat—which materially assists in detaching the membrane; as gargle, trypsin, 2 per cent. sol. in alcohol, hydrochloric acid dilute; also, free nourishment, and stimulation by alcohol; internally, mur.-tinct. ferrum and potash, merc.-proto., lachesis, kali bicrom., nitric acid, quinine, and corrosive sub., as indicated. The cor. sub. can be given $\frac{1}{4}$ gr. in forty-eight hours to a child two years of age, if required.

In the gangrenous form, free stimulation and nourishment; as gargle, trypsin, 2 per cent. sol. in alcohol, hydrochloric acid dilute, boracic acid, 1-1,000 sol., corrosive sub. sol.; internally, lachesis kali-bicrom., cor. sub., salts of iron, quinine, and carbolic acid. With a proper selection of the foregoing remedies to suit individual cases, the mortality from diphtheria may be greatly reduced.

—Avery, in *N. Y. Medical Times*.

ONE HUNDRED DON'TS IN SYPHILIS.—

1. Don't salivate your patient.
2. Don't frighten your patient with the seriousness of syphilis.
3. Don't tell your patient that syphilis is incurable.
4. Don't send him to Hot Springs.
5. Don't permit your patients to do as they please.
6. Don't fail to impress your patient with the infectious nature of syphilis.
7. Don't permit your patient to become melancholy.
8. Don't order inunctions for a married man.
9. Don't be afraid to give your remedies in doses that are high enough.
10. Don't regard every symptom and lesion as syphilitic because the patient is.
11. Don't pronounce a case not amenable to treatment; send the case to one who knows more about the subject than you do.
12. Don't operate on syphilitic lesions under the impression that they are epitheliomata.
13. Don't inquire as to how the disease was acquired. The patient will tell you unsolicited or will lie about it.
14. Don't fail to employ local applications.
15. Don't begin general treatment as soon as the chancre appears; it might not be a chancre.
16. Don't forget that some persons have large inguinal glands, normally.
17. Don't suggest alopecia to your patient, or he will pull out half of his hair to see if it is falling out.
18. Don't fail to watch closely for iritis. This needs immediate attention when it occurs.
19. Don't forget to make syphilitics keep their teeth clean.
20. Don't use nitrate of silver on mucous patches. Use nitric acid, pure carbolic acid, creosote, or cam-

pho-phenique, according to the depth and severity of the lesion.

21. Don't let your patient neglect taking medicine.
22. Don't foretell any results. They may not occur; or some may arise which you did not foresee.
23. Don't permit smoking or drinking during the early stages of syphilis.
24. Don't neglect any detail.
25. Don't permit a syphilitic to marry until you can conscientiously do so.
26. Don't attempt to make all syphilides disappear by internal medication alone.
27. Don't hesitate to use energetic treatment when it is indicated.
28. Don't let your patient get diarrhoea. If it comes on, stop it.
29. Don't let your patient get an iodic eruption. Use bicarbonate of soda.
30. Don't excise a chancre. It is useless except for cosmetic purposes.
31. Don't order mercurials or iodides to be taken before meals.
32. Don't pronounce a case, one of syphilis, until you know it to be such.
33. Don't make your external application too strong.
34. Don't fail to tone up your patient during the secondary period of incubation.
35. Don't place too much reliance upon the history furnished by your patient.
36. Don't imagine that the social standing of your patient is a guarantee of the disease not being syphilis.
37. Don't forget that tannate of mercury is indicated when gastric irritability is present.
38. Don't try every new remedy on your patient.
39. Don't forget that the mercurials and iodides are the only reliable remedies in syphilis.
40. Don't weaken your patient by excessive sweating.
41. Don't starve a syphilitic.
42. Don't abandon the iodides because they irritate the stomach. Administer them in milk, or try other iodine preparations.
43. Don't permit a syphilitic's pregnant wife to go to full term without placing her upon specific treatment.
44. Don't forget that, as a rule, syphilis is of a milder type in women than in men.
45. Don't forget to examine the genitalia of every syphilitic woman. They are prone to moist condylomata.
46. Don't excise syphilitic condylomata. They readily yield to topical applications.
47. Don't fail to look for the chancre. It must be somewhere.
48. Don't imagine that every pharyngitis in a syphilitic is necessarily specific in character.
49. Don't permit a syphilitic to kiss others. Mucous patches may have developed within a few hours.
50. Don't forget that tertiary symptoms may come on early in the disease.
51. Don't fill your patient with mercury for tertiary lesions.
52. Don't promise to remove bony growths (exostoses, etc.), by medication.
53. Don't permit gummata to ulcerate.
54. Don't regard any syphilitic lesion as too insignificant to deserve attention. It may be of the highest importance.
55. Don't push your remedies if they are not well borne. The reason for the want of tolerance must be found and corrected.

56. Don't neglect the patient's general condition.
57. Don't forget that potassium salts are more irritating than the sodium or ammonium salts.
58. Don't lose sight of the fact that the squamous syphilides require the local treatment given in psoriasis.
59. Don't use the same dose for every patient. Each case is a law unto itself.
60. Don't use the iodides in the early stages of syphilis.
61. Don't fail to watch your patients' gums closely while you are giving mercurials.
62. Don't forget that syphilitic eruptions itch in the hairy portions of the integument.
63. Don't imagine that syphilis can be "boiled out."
64. Don't forget that chancres may suppurate.
65. Don't cauterize a chancre.
66. Don't forget that chancre may be multiple.
67. Don't think that because an eruption is mild the process will not be severe.
68. Don't suppose that syphilides are painful until they attack the deeper structures.
69. Don't forget that brain-workers are most prone to syphilis of the brain and cord.
70. Don't call a phagedenic chancroid a mixed chancre.
71. Don't cauterize a serpiginous syphilide.
72. Don't place too much reliance upon vegetable alternatives.
73. Don't cut out the inguinal ganglia. It does no good and mutilates your patient.
74. Don't expect to find every chancre indurated. In some localities the chancre never indurates.
75. Don't permit a syphilitic, who has eruptions, to use the same towel in common with others.
76. Don't let a syphilitic sleep with one who is free of the disease.
77. Don't permit the secretions of syphilides to accumulate.
78. Don't trephine for gummata of the brain.
79. Don't give the patient the "benefit of the doubt" by placing him under specific treatment. It only increases the doubt.
80. Don't fail to make facial syphilides disappear as rapidly as possible.
81. Don't call a relapsing indurated syphilide a chancre.
82. Don't give quinine in syphilitic fever.
83. Don't hesitate to dress serious lesions yourself. You will then know they receive proper attention.
84. Don't fail to give your patient a mouth-wash and gargle during mercurial treatment. It will counteract the effects of the mercury to a certain extent.
85. Don't call the pigmentation of syphilis tinea versicolor.
86. Don't take flea bites or the eruption produced by the bites of other insects for the erythematous-syphilide.
87. Don't forget that a chancre may be but a slight erosion.
88. Don't take a chancre of the tonsil to be an enlarged tonsil.
89. Don't believe all the stories of mediate contagion which patients will tell you.
90. Don't forget cleanliness in the treatment of the chancre.
91. Don't administer iodide of potassium in very small doses.
92. Don't attempt to treat a case of syphilis if you cannot give it your continuous attention.

93. Don't forget that iodide of potassium is best administered in milk.

94. Don't forget that syphilis attacks the nervous system very insiduously.

95. Don't permit a syphilitic nurse to suckle a healthy child, nor a healthy nurse a syphilitic child.

96. Don't always expect a child to show evidences of congenital syphilis at birth; they frequently appear later on.

97. Don't fail to watch closely the offspring of syphilitic parents.

98. Don't rely upon the dictum that syphilitic eruptions are always symmetrical.

99. Don't regard syphilitics as criminals; they are unfortunate.

100. Don't fail to point out to every syphilitic that he or she is a focus of infection, a dangerous member of the community, and enjoin the exercise of the greatest care to prevent the accidental infection of others. Against deliberate infection there is no protection.

—Ohmann-Aumesnil, in *Cincinnati Med. News*.

GERMAN NOTES.

HERMAN MARCUS, M.D.

THE USE OF KAVA IN GONORRHOEA.—This drug is recommended by Dupony and Gubler as almost a specific in the treatment of gonorrhoea and leucorrhoea. The active principles of the plant are a resin and a crystalline substance, called by Gubler, kavaine. The administration of kava in gonorrhoea increases the urinary secretion, reduces inflammation, and quiets pain. It has the advantage over balsam of copaiba in that it has a pleasant taste, and does not affect the stomach unpleasantly. The plant is a native of the islands of the Pacific.—*Deutsche Medicinal Zeitung*.

PILOCARPINE IN FISH POISONING.—Dr. Danilevsky, of Jelezovodsk, reports a case of poisoning by salt sturgeon treated and cured by pilocarpine. The patient suffered alarming prostration, with almost total suppression of all the secretions. On the fifth day, when death seemed inevitable, pilocarpine was tried, with prompt relief of the more distressing symptoms. The patient continued weak for ten or twelve days, but made a good recovery. The drug was given in quantity of one-fourth of a grain daily until salivation was induced, and the quantity of urine had reached the normal mark.—*Vratch*.

Medical News and Miscellany.

A DOCTOR in Connecticut has recently been fined ten dollars for refusing to attend a boy who had been bitten by a dog. The claim was that the boy had suffered unnecessarily before he could receive medical aid, and that the delay had resulted in greater disfigurement from the scar.—*Ex*.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.—The permanent International Committee has appointed the following International Sub-Committee to prepare a scheme for the organization of future Congresses: Professor Brouardel, (France), Professor Dr. Fódór, (Hungary), and Professor Corfield (England), to represent Hygiene; and M. Kőrösi (Hungary) and Dr. Janssens (Belgium), to represent Demography.—*Ex*.

THE Mississippi Valley Medical Association will hold its Seventeenth Annual Session at St. Louis, Wednesday, Thursday and Friday, October 14, 15, 16, 1891. Reduced rates. An excellent programme will bring out a large attendance. The medical profession is respectfully invited. The officers are as follows: C. H. Hughes, M.D., 500 N. Jefferson avenue, St. Louis; E. S. McKeith, Secretary, 57 W. 7th street, Cincinnati, Ohio; I. N. Love, M.D., Chairman Committee of Arrangements, 501 N. Grand avenue, St. Louis, Mo.

KOCH INSTITUTE IN BERLIN.—The clinical section of the new Institute will be completed within a few weeks. There are seven parlors, having accommodations for 108 patients, and two parlors for physicians and attendants. Prof. Ludwig Brieger will probably be at the head of the clinical department, and Dr. Richard Pfleger will have charge of the scientific department. Koch, it is said, will receive a salary of 20,000 marks (\$5,000), and Drs. Brieger and Pfleger each 6,000 marks (\$1,500).—*Ex*.

A FIVE-YEARS' MEDICAL COURSE IN CANADA.—The Medical Council of the College of Physicians and Surgeons of Ontario, recently passed the following resolution: "On and after July 1, 1892, every student must spend a period of five years in actual professional studies, except as hereinafter provided, and the prescribed period of studies shall include four winter sessions of six months each and one summer session of ten weeks; the fifth year shall be devoted to clinical work, six months of which may be spent with a registered practitioner in Ontario, and six months at one or more public hospitals, dispensaries, or laboratories, Canadian, British, or foreign, attended after being registered as a medical student in the register of the College of Physicians and Surgeons of Ontario; but any change in the curriculum of studies fixed by the Council shall not come into effect until one year after such change is made."

—*St. Louis Medical and Surgical Journal*.

OSSIFICATION OF THE EYE.—Samuel A. Avila, the Republican leader in the Eleventh ward in Brooklyn, recently had his left eye removed by a surgeon, says the *New York Sun*.

Thirty-five years ago, when in his nineteenth year, Mr. Avila was badly injured while he was at work in his father's paint shop, a piece of broken nail having lodged in his eye. By the advice of Dr. Agnew he concluded not to have the piece of nail removed, and until last March, when he began to suffer from pains in the left side of his head, he experienced no trouble from it.

The pains in his head became so acute that he consulted Dr. Matthewson, who informed him that he was suffering from the very rare disease of ossification of the eye, and that he would have to get it out. The operation was successfully performed about a week ago. Mr. Avila says that he never had a better time in his life than during the hour he was under the influence of ether. The small piece of nail is still in the ball, as the ball is so hard that the iron cannot be removed from it.—*Ex*.

A NEW TREATMENT FOR ECZEMA.—Eczema is so frequently rebellious to the resources of our ordinary therapeutics that we shall not complain at seeing new curative measures recommended. The one brought forward by a French physician, M. Bourdin, combines the merit of being easily applied with that of having already produced improvement

tion, but later, at the site of its insertion, a nodule developed. The patient declined to have the second breast removed, and disappeared from the surgeon's observation.

It is pleasing to note that the French Academy, at the close of the reading of this paper, expressed only its stern disapprobation of the methods employed, and by silence refused to discuss the scientific aspects of the cases. The indignation was not confined to the Academy, but also found vent in the public press, and Cornil felt compelled to defend himself in a letter to *Le Temps*, in which he defends the publication on somewhat remarkable ground. He compared it to the breaking of a bridge in a railroad accident, the causes for which are sought in the midst of the calamity. He further instances the well known case of Alexis St. Martin, whose accident gave Dr. Beaumont an opportunity to investigate the function of the stomach. From these he urges that, while we must condemn the surgeon who did the work, we ought not to ignore whatever the unfortunate occurrence may teach us. This is pure sophistry. It ignores the grand object of medicine, which is to relieve suffering, not to acquire abstract knowledge. And questions which require for their solution the infliction of needless suffering on human beings must wait until a proper opportunity for their solution presents itself. We cannot afford to stultify our profession, whose great boast—and whose legitimate boast—is its humanity, by such criminal acts.

Putting humanity entirely in the background, such experiments cannot be defended even in the name of science, for they are not scientific. They prove only that the implantation of a sarcomatous or epitheliomatous mass in persons already suffering from the corresponding disease is capable of causing a local sarcomatous or epitheliomatous growth. This does not prove that these growths are infectious, for who can say that some other form of irritation in these same individuals would not have caused like results? The gain to science by these experiments is decidedly problematic; at most it is insignificant, and utterly incommensurate with the cost at which it was obtained. We could far better have afforded that such experiments should have forever remained untold than have gratified—perhaps to some extent justified—the individual who made them. If, however, the storm of indignation which has been aroused shall deter others who might have in view, in their zeal for science, similar unjustifiable experiments, Cornil's publication will have had a real, though unexpected value.

It remains to be said that, since the Parisian affair, Professors Hahn and Von Bergmann, of Berlin, have both been openly charged, by an officer of the German Government, with having inoculated cancer in the healthy human being. Their reply has not yet come to hand.

—*The Journal of the American Medical Association.*

A COLD GREENHOUSE.—A German horticultural journal says, that one of the latest inventions in medicine is the use of Cold greenhouses in tropical countries as a means of combating yellow fever. This disease, it states, can be conquered if one removes to those elevated regions in which oaks will grow. This fact recently inspired a celebrated Cuban physician with the idea of reducing the temperature of sick-rooms by artificial means, and wonderful cures resulted. Now it is proposed that, in districts liable to the epidemic, each town shall erect a great glass house in which plants of cold and temperate regions may be grown, the temperature being artificially cooled instead of heated, as in our greenhouses, and that they shall be devoted to the treatment of patients suffering from the fever.—*Garden and Forest.*

Army, Navy & Marine Hospital Service.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from August 23, to September 7, 1891.

Major Samuel M. Horton, Surgeon, U. S. Army, is relieved from further duty at Fort Adams, R. I., and will proceed to San Diego, Cal., and report to the commanding officer for duty at that post.

Leave of absence for fifteen days is granted Surgeon J. V. D. Middleton, U. S. Army.

Leave of absence for twenty-five days is granted Major James P. Kimball, Surgeon, U. S. Army.

Captain M. C. Wyeth, Assistant-Surgeon, U. S. Army, sick leave of absence extended three months on surgeon's certificate of disability.

Captain James E. Pilcher, Assistant-Surgeon, U. S. Army, is relieved from duty at Fort Clark, Texas, on expiration of leave of absence, and is assigned to duty at Fort Ringgold, Texas.

Major Dalery Havard, Surgeon, U. S. Army, granted three months' leave of absence to take effect on or about September 5, 1891.

Leave of absence for one month, to commence on or about September 3, 1891, is hereby granted Captain Adrian S. Pathemus, Assistant-Surgeon.

Leave of absence for fifteen days is granted Captain L. W. Crampton, Assistant-Surgeon, U. S. Army.

Changes in the Medical Corps of the U. S. Navy for the two weeks ending September 5, 1891.

HESLER, F. A., Passed Assistant-Surgeon. Detached from U. S. S. "Pensacola," and to the U. S. S. "Charleston."

WELLS, HOWARD, Surgeon. Ordered to temporary duty in the Bureau of Medicine and Surgery.

DICKSON, S. H., Surgeon. Detached from the practice ship "Constellation," and wait orders.

CURTIS, L. W., Passed Assistant-Surgeon. Detached from the "Constellation," and to the Naval Academy.

RUSH, W. H., Passed Assistant-Surgeon. Ordered to the U. S. S. "Yantic."

BEYER, H. G., Passed Assistant-Surgeon. Detached from the U. S. S. "Yantic," and granted two months' leave.

BOYD, ROBERT, Assistant-Surgeon. Detached from the U. S. S. "Dale," and to the Marine Rendezvous, Boston.

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Original Articles

SPINAL SUPPORT.

By STEWART L. MCCURDY, M.D.,

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TRACTION, either by the use of the rachet extension or elastics, has undoubted value in all forms of spinal distortion.

In the adjustment of the plaster of Paris jacket, as used by Sayre, the leather jacket as described by Bartow, the woven-wire corset of Roberts, the felt jacket or the braces of Davis, Taylor, Washburn, Andrews, Shaffer, Smith, Stillman, and Beely, a certain degree of tension is made upon the spinal column while the patient is in the tripod, and the support applied; but at no time thereafter is the traction made upon the spine, or support given the trunk, equal to that obtained at the time of its adjustment.

The brace herewith presented will appear to you as a modification of the Roberts' jacket, and closely akin to Wyeth's jacket, but will say that I never saw Wyeth's jacket until I read Schrieber's work on orthopedics.

After having temporized a spinal traction device with the patient in the horizontal, by the use of an ordinary corset cut through the smallest portion, the upper portion being attached to the head of the bed, the counter-traction by weight and pulley over the foot of the bed from the lower segments of the corset, I set about to produce the same results and allow the patient to go about.

The result is herewith presented, which, as you see, is made of leather, belt leather being preferable, and composed of two segments that lap over each

other at the smallest point of the waist and are held together in front by lacers or buckles.

The lower segment, which rests about the pelvis, is the fixed point, and the counter-traction, or elevation, is made by the upper segment fitting snugly about the inclination of the lower thorax, in case where the diseased area is in the dorsal or lower lumbar region.

The essential elements of an extension apparatus are, a double system of maleable wire bars, arranged parallel and secured together at the proximal ends by a collar that slides over its fellow, and from which project hooks.

The distal ends are the fixed points, and are secured to the upper and lower segments of the jacket, near the edge, by rivets, two in front and two along the spine, as represented in the model.

By throwing an elastic over the hooks projecting from the proximal ends, you see the distal ends are thrown further from each other.

These are so arranged that they can be extended and then relieve the weight of the body from the diseased area at the surgeon's will.

This traction or support is obtained in two ways:

1. By the elastic traction bars, as shown.

2. By the use of the key and rachet extension as used by Sayre and others in the treatment of hip disease.

In addition to the jacket, plaster suspenders are made by throwing three or four folds of the bandage back and forward over the shoulders.

The use of these suspender-casts of the shoulders will be described later. The jacket is removed in the ordinary way by cutting down over the sternum, but the shoulder-straps are not cut, but are drawn over the shoulders as a vest is taken off.

Instead of the jury-mast of Sayre, or the spring traction-collar of Roberts used where the spondylitis is in the dorsal or cervical vertebræ, a substitute has been provided, which is made by making malleable

¹ Read before the Ohio State Medical Society, June 17, 1891, at Sandusky, Ohio.

steel suspenders after the form of the plaster suspenders above referred to. These are formed over the shoulders, one on either side, and are continuous with the upper ends of the traction bars of the jacket.

From the highest point on these suspenders, or about under the ears, a "C" shaped piece is riveted which curves toward the neck and around the coat collar to a point directly over the other end.

From this point another set of extension bars pass up along the side of the head superior to the parietal eminence.

From these the ordinary occiput-mentum suspension is secured.

No one has ever claimed that the plaster of Paris jacket retains that degree of tension made upon the spine at the time the body of the sufferer is suspended by the tripod; and as a matter of fact the body, after a day or two, conforms to its right encasement about it and settles down, so that all the extension made at the time of adjustment is lost, and, as time passes, the plaster breaks and gives way, and the thorax continues to slide down, so that, in a short time after the plaster jacket is applied, the amount of traction desired by the surgeon, and obtained by him at first, is materially reduced, and the jacket remains as a support only, and pain at the point of the disease again appears, and another jacket is necessary.

We can, at least, prove that the extension powers of the plaster jacket are daily diminished instead of increased.

I am aware that many of the orthopedic surgeons of to-day do not believe in traction in the treatment of any form of joint trouble, but insist that such treatment is positively injurious; but, as for myself, I have other testimony, and believe these cases receive the most benefit from a spinal support that not only retains that degree of traction made upon the vertebral column at the time of the application of the support, but will, if desired by the surgeon, increase the tension at will.

Great traction is seldom demanded, but all cases do demand that the weight of the body should be kept off the diseased area during the stage of molecular disintegration, absorption and reproduction of the vertebral body.

This cannot be expected if the body is pulled up by a tripod for a day or two and allowed to sink down into a jacket; the jacket then cut open, removed, and reapplied or renewed.

This trouble admittedly begins primarily, as other joint troubles, as an inflammation of the synoidal membrane between the vertebral bodies, or as a central *ostitis-myelitis* in Pott's disease, and as an inflammation of a lateral fascet, either as a *synovitis*, or *ostitis* in *scoliosis*, or lateral curvature, or distortion.

Unless this inflammation is controlled very early, it advances, as does hip and knee cases, to an involvement of cartilage and bone successively, and a distraction of the vertebral continuity is the result, and the various deformities, viz., *scoliosis*, *lordosis*, *gomphosis*, etc., necessarily follow.

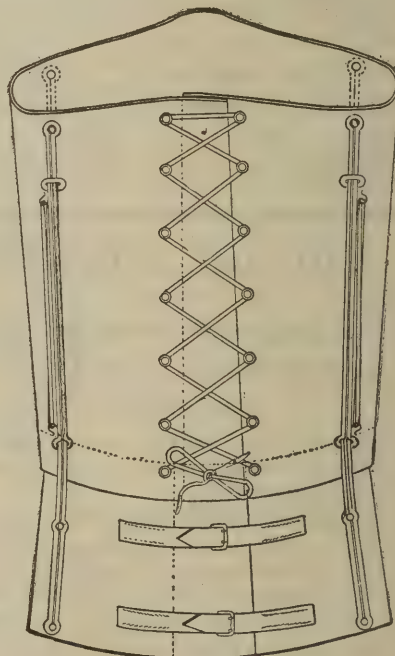
I want right here to refer to a few points in diagnosis, not for the benefit of the orthopedic specialist, but for the general practitioner, under whose observation these cases almost invariably first appear.

Incipient *synovitis* of the lumbar spine is too frequently called by the vague term "lumbago," and early *spondylitis* of the other regions is generally put upon treatment for congestion or *anæmia* of the cord etc., and the true malady allowed to go on uninterrupted; the true nature of the trouble being discovered only when the unmistakable symptom of spinal

distortion occurs, when it is, alas, too late to cut short or abort these terrible afflictions.

The most important diagnostic procedure is, after first locating a painful point, either made so by pressure or constantly painful, to gently tap either shoulder with the side of your hand. If the spine be diseased the pain will be increased. Now grasp the patient under the arms and lift the trunk's weight off the pelvis with sufficient force to relieve its weight from the spine, and if the spine be the seat of *synovial* disease, the pain will disappear. Now sway the body from side to side and, if the *synovial* membrane of either lateral articulation be the seat of the trouble, the pain will be relieved when the body is thrown from the trouble, and increased when bent toward it. Again, ask the patient to walk across the floor, and observe his gait and carriage. If the spine be the seat of the trouble, he will be found to walk cautiously and with a gentle tread, and not on the heels, for forcible locomotor treads impart to the diseased portion vibratory concussion, and pain is increased.

These spinal troubles are very often the result of spinal sprains.



No. 1.

You cannot always expect to find pain in the early stages, and not infrequently do we meet cases without history preceding deformity.

In the treatment, the first indication, I believe, is to relieve thoracic pressure upon the inflamed *synovial* membrane and give the diseased parts an opportunity to repair, or, if it has gone too far, or was primarily an *ostitis*, it can pass through the various stages with a minimum of deformity and positive assurance that the deformity will be less, rather than greater.

This jacket is of great value, not only in lateral curvature and *lordosis*. By placing the extension bars in opposition to the line of deformity, the distortion can be gradually and continuously overcome.

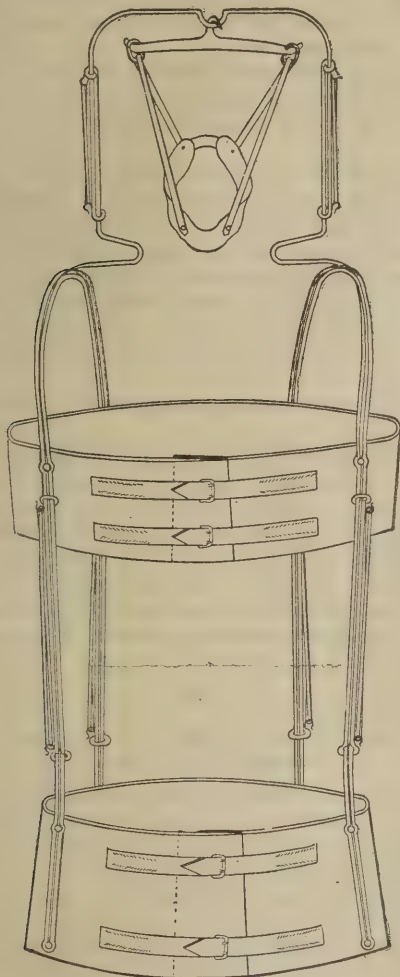
To illustrate: In cases of *lordosis* where it is desired to have the fixed point as far forward as possible in order to throw the trunk weight back as well as up, the lower ends of the two bars can be secured to the lower segment of the jacket, anterior and superior to the anterior superior spine of the ilium, and made to

curve around backward and upward to a point between the posterior auxiliary line and the inferior angle of the scapula. The direction of the bars in all cases to be so arranged as to be in opposition to the line of deformity.

If there be anything in suspension in the treatment of diseases of the spinal cord, as practised by S. Weir Mitchell in cord troubles, secondary to vertebral diseases, and by Charcot and others in locomotor ataxia, the same end can be obtained with this suspension jacket.

The jacket affords :

1. A permanent structure.
2. Support that increases, if desired, and never decreases.
3. The most comfortable of jackets.
4. Can be removed at any time, and readjusted without destroying the jacket or its supporting powers.



No 2.

Jury-mast affords :

1. Continuous elevation of the head.
2. Freedom of movements of head.
3. Patient can lie down on the back, thus affording one of nature's greatest remedies—viz., recumbency.
4. Never necessary to cut the clothing, for the brace fits the coat collar.
5. Suspension from four different points equal distance about the pelvis and not from one point over the vertebra, which increases pressure upon the diseased area.

These braces are all made of wire and a two-fold advantage will be found in the use of the material for their construction.

1. Economy.

2. A minimum of friction.

The greatest objection made against this mode of mechanical therapeutics is, that it would not work because the friction of the bars almost equaled the extension powers of all the elastics that could be used.

With the wire braces, however, there is no friction except at the two bands which hold the bars together, and that, instead of being a flat surface, is merely a circle in contact with another circle, which, as you see, affords a minimum of friction.

Besides, others who have practised elastic traction, have always used the elastic webbing.

For great distances this may do, but the space used at either end with leather, etc., to make the elastics so that they can be attached to the bars, destroys the usefulness of the elastics at least 50 per cent.

I always use the rubber rings of Faber, etc., and I can get all the power necessary to overcome the contraction of any set of muscles.

Cut No. 1 represents the jacket to be used in lumbar dorsal disease.

Cut No. 2, with the jury-mast, is to be used in cases where the caries is above the eighth dorsal vertebra or cervical caries.

The jacket is not made solid because it is not necessary, but in cases of the upper dorsal, say from eighth to third, both the jury-mast and complete jacket should be used to insure the best possible results.

In cases where the caries is in the cervical region, especially the upper portion, the lower extension bars, or those about the thorax, are unnecessary, for the ones from the shoulder suspenders up have sufficient power to support the head.

MORPHOMANIA FOLLOWED BY RAPID NARCOSIS.

By T. K. WILLIAMS, M.D.,
GERMANTOWN, TENN.

ON the night of the 7th inst., while doffing my attire for a much-needed night's rest, a peremptory summons came from Mrs. M. to delay no time in repairing to her house, as she was fully persuaded in her own mind that her husband was utterly deranged. I was on the spot in ten minutes. I was met by the entire family at the front gate, to which place they had fled, seeking safety from an irate and unappeasable father and husband. M.'s autocratic proceedings brought in the neighbors, who did not arrive till he was in bed, with the lamps all extinguished—forced possession, blown out the lamps, ejected the family, and retired for the night. Nor could his sleep be broken, notwithstanding a mastigosis had been practiced on him almost akin to assault and battery.

His good wife, crouched in the shrubbery near the gate, came out and told with breathless silence and in a terror-stricken manner how M. had deported himself during the day; how his peculiar conduct was so strikingly strange, when contrasted with his usual mild way and unobtrusive manners. She further told, when he came home from the store what a suspicious, wild look he bore, and how unresting and vicious his eye looked; and how soon came the most convincing proof of mad insanity, in his efforts to exterminate his family in one short drama, with a well-sharpened hatchet, from which the family beat a precipitous retreat. So convinced was this poor wife of his utter insanity, she stood pleading questions as to whether or not his mind would ever be right again.

It was 10 o'clock P. M. when I saw him. His temperature was $98\frac{2}{3}^{\circ}$ F.; pulse full, round, compressible; heart action good; valve accentuation good; pulse gave evidence of sixty-eight systoles per minute. The diaphragm made twenty-two excursions per minute; the velum pendulum palati swung to and fro with only an occasional stertor, between which a noiseless sleep came and went. The pupils were firmly pin-holed, and could not be affected by the most intense light. The sensorium was greatly affected by this present state of narcosis.

I flagellated M. with great severity with a towel dipped in cold water, but could not break sleep's fetters, so firm was the environment. Fortunately, I had previously a little experience with him. I knew he was one who had carried the morphine habit to an alarming extent; to my own knowledge xx grs. was his daily bread, which amount he was wont to take without any other effect than that of enabling him to perform the requisite amount of physical labor during the day without any perceptible or appreciable weariness from such efforts.

I had no means to determine the quantity of morphine M. had taken, and, in taking a general survey of every indication and condition, I determined to await the issue, and meet indications, and deal with exigencies as they arose. It could not be determined what amount of the drug was ingested. At all events, M. was doing well, and "hands off" was the mandate of common wits; indeed, to attempt an antagonism when the effect of the drug was almost nil, and when the amount ingested unknown, seemed to me an experiment in which I might have been taught ever in the future to let well enough alone. The condition induced by the drug is always to be antagonized, and let the drug itself make its way out of the system as speedily as possible, per *vias naturalis*.

I was personally apprised of the fact that M. was one of those who had an abiding faith in the powers of the papaver somnifera; in it he found a balm for even woe; so frequently did he resort to it, and so great the quantity, that his systemic organs were greatly obtunded, so much so as to require inordinate doses to produce the desired effect; but was this necessarily so with other medicaments of an antagonistic or synergistic nature. At all events, the condition induced from the drug was to be met—the effect of the drug was more important than that of the mere presence of the drug. Had I been in possession of the facts; had I known that M. had within his chylopoëtic viscera xxx grs. of morphine sulph., I would have felt quite uneasy; but this fact was not known until M. was restored to full possession of his faculties. Failing to bring about a restoration of M.'s faculties or conscious presence by shouting and hallooing in his ear, and by flagellating him with severity with a wet towel, I inferred that he was well on the road, jogging along from narcosis to coma, I determined to give him a journey, but not without some jolting, so I sent to my office near by, to my student, who brought up two admirable instruments well adapted for this work—Kidder's galvanic and faradic apparatus, provided with systems of levers, by which the current could not only be opened and closed at will, but reversed instantly. A strong faradic current was employed; the anode was disposed at the dependent root of the phrenic nerve; the cathode at the right margin of scrobiculus cordis, and retained there for fifteen minutes, after which a vigorous effort was made by M. to disengage himself from the circuit, and this with some considerable effort, after

which he became so sensitive to the current as not to be able to tolerate it at all. The sopor remained, but ever afterward a loud call, or a touch, brought forth a response. All traces of the narcosis and sopor had vanished at 4 A. M., and M. was on his feet ready and willing to engage the day and enter into the duties thereof. At the usual business hour M. was at his post of duty, nor could there be traced in his unruffled countenance the scar of a vexatious dream, or the footprint of an unbridled nightmare; not the slightest trace in the lineaments or physiognomy that bore evidence of the night's adventure.

From the foregoing history the following deductions are worthy of consideration:

Conditions, not medicaments, are always best antagonized.

Because a narcotic has been ingested, this fact does not warrant a *prima facie* conclusion that it will enter the chemistry of the system, or disturb the physiochemical morphosis to that extent as to make vital conditions incompatible.

The danger of carbonic acid in opium narcosis is almost nil. When vital morphosis is retarded the elimination of CO_2 is materially affected and almost suppressed.

Excitation of the respiratory centers is the readiest, if not the surest, way to excite and perpetuate heart action, on account of the reciprocity of these functions, induced by the most intimate connection of the parts.

An attempted antagonism, without the aid of a galvanic or faradic current, is an effort of doubtful results.

Atropine, caffeine, strychnine, and quinine (in j gr. doses, at short intervals), are the most trustworthy medicaments.

The hypodermic system of exhibition should have preference.

If the circulation is not adequate to the task of carrying the medicaments to the centers, then work the respiratory centers cautiously, as long as they will respond to the galvanic or faradic current; but do not exhaust this function by too repeated demands on its working capacity. The diaphragm should not be made to make more than twelve excursions per minute in profound narcosis; more is unnecessary.

UTERINE FIBROMA.¹

By J. B. MURFREE, A.M., M.D.,
MURFREESBORO, TENN.

EVERY part of the human body is supplied with nerves, blood-vessels, capillaries, and lymphatics, and there is a continuous growth of all the parts. Under the general law of nutrition there is regularly being added new material, which is converted into new tissue, like the original, and there is also constantly taking place a waste of tissue element. Hence, in all the organs and tissues of the body we have a constant waste and repair going on, which in the adult is nearly equal. Occasionally, however, from some interruption or exaggeration of the law of nutrition, some disturbance of the equalization of the controlling power of waste and repair, the accretion of nutrient material is in excess of the waste, and as a result we have a surplus of new tissue, which does not remain dormant; but, owing to some mysterious law of Nature, is endowed with the faculty of accumulation; *i. e.*, the power of growth.

This excess of tissue deposit is called a "morbid growth," and may occur in any part of the human body. However unexplainable these morbid growths

¹ Read before the Tri-State Medical Society.

may appear to us, yet we know that they are due simply to a perversion of nutrition, and this perversion may occur in the vegetable as well as in the animal kingdom. The beautiful mistletoe which springs from the towering oak, though its seed may have come from afar, yet lives and grows from the sap of the tree. So in a fibroid tumor of the uterus, though some latent cause may have started it into existence, yet it is fed by the same blood that supplies the normal tissue, and grows under the same law.

In the female economy the uterus is the favorite seat of these morbid growths; its tissues furnishing a suitable nidus for their origin and development.

It is to a study of these morbid growths of the uterus that I invite your attention.

These morbid growths are due to a perversion of nutrition; are non-malignant in their character, and homologous in their structure.

Though innocent in themselves, yet they give rise to a great deal of trouble, produce much suffering, and sometimes occasion death; not by any destructive power of their own, but simply by their mechanical interference with the tissues and functions of the uterus and adjacent organs.

A uterine fibroma, or fibroid, may be defined to be a morbid growth developed within the muscular walls of the uterus, and is composed of "muscular-fibro cells, fibro-plastic elements, and cellular tissue."

"Microscopic investigations show that the chief mass of the tumor consists of smooth muscular fibers, which considerably exceed in size those of the unimpregnated uterus. The muscular fibers are arranged in bundles, and the latter unite variously at acute angles to form larger groups, which inclose a wide capillary blood-vessel. The walls of the latter consist of a simple layer of endothelium cells, with large nuclei, and are supported by a thin layer of fibrous connective tissue, from which processes penetrate between individual groups of muscular bundles, and unite with coarse partition walls between the individual vascular districts."

The further increase in size of these tumors ensues (rarely) by the coalescence of several of them; more frequently it takes place by the same process being repeated which gave rise to the smallest and simplest fibro-myomata. Each individual vessel, with the muscular and connective tissue masses belonging to it, proliferates again and forms, as it were, a second generation of nodules, which are imbedded in the original tumor and distend the latter.

Fibroid growths of the uterus have doubtless existed in all ages of the world, though not recognized as such. It is true that the histological elements of a fibrous tumor are the same as those of the uterine walls within which it is lodged, yet the construction and arrangements of the textures differ, and cause a difference in the appearance of the two products. The fibrous tumor is denser in structure, less vascular, less colored, and more like cartilage.

The most usual seat of a uterine fibroma is in the body and fundus of the uterus, occasionally they grow from the cervix. While uterine fibroma are in themselves entirely innocent and have no tendency to malignancy, yet they are capable and do cause much distress and suffering from their mechanical pressure upon the uterus and adjacent organs, thereby disturbing their natural functions. They very often cause frequent and profuse hemorrhages, menstrual derangements, cystic and rectal irritation, obstinate constipation and persistent dysuria. And as the tumor grows it displaces the uterus, increases the

disturbances in the neighboring organs, and causes obstruction to the circulation which gives rise to annoying pains and intense swelling in the lower limbs. In addition to the local disturbances, the general system suffers more or less from the irritation of the nerve centers reflected from the local ailment.

This constant wear upon the nerve tissue, the frequent hemorrhages and the digestive derangements, soon produce a condition of anæmia.

As the tumor continues to enlarge and rises above the pelvic brim, still further pressure is made upon the abdominal organs, retarding their functional activity until a state of exhaustion is produced, which finally ends in death.

From the history of uterine fibroma we learn that while they are not malignant and have no tendency to become malignant, yet we also learn that they are progressive in their evolution and are likely to produce great distress and suffering, often terminated only by death.

At one time uterine fibroma was regarded as being malignant, and consequently incurable; even within the present century Ashwell taught that they were cancerous in their nature. At the present time, however, there is perhaps no question in gynecology more definitely settled than that uterine fibroma are not malignant. In their nature they are not cancerous, but in their very constituency are innocent and belong to what is denominated the homologous formations and not to the heterologous.

Although the innocuousness of a uterine fibroma is established, yet there is a point in their pathology which is not so well determined. That is, whether a fibroma of the uterus may not undergo some degenerative process and become cancerous. Emmet favors this view, saying, "Fibroids occasionally become the seat of the sarcomatous and carcinomatous growths," and quoting from Klebs adds, "With these hyperplastic new formations, heteroplastic ones become associated, of which, within the fibro-myomata of the uterus, myxomatous and sarcomatous developments occur." "Epithelial formations are completely wanting, and genuine carcinomata can thence only proceed out of fibro-myomata in these cases in which the formation of the tumor extends to the surface of the mucous membrane."

Thomas, on the contrary, denies that a fibroma may become malignant, and says, "If such alteration be possible it is extremely rare, and is not an issue to be apprehended."

Possibly, like other tissues from severe and often repeated irritation, a fibroid may take on a malignancy, but of itself it has no inherent tendency to malignancy.

A fibrous tumor begins its growth in the muscular tissue of the wall of the uterus, but many causes combine to determine the direction that they may take, which are various and quite different.

The peculiar and determinate direction which a fibroid growth of the uterus assumes, has led to their classification in quite an intelligent and useful manner.

When a fibroid tumor lies buried in the walls of the uterus, it is called an interstitial fibroma; when it grows toward the external surface, it is called a subperitoneal fibroid, and toward the internal surface, a submucous fibroid.

The interstitial variety is usually stationary. The subperitoneal variety is liable to become pedunculated; by the repeated contractions of the uterus it is forced from its bed into the abdominal cavity, and by its weight becomes pedunculated. Likewise a submucous fibroid may be gradually forced by the frequent

uterine contraction pressing it in the direction of least resistance, from the uterine walls into the cavity, receiving in its transit a covering of the mucous membrane, it also becomes pedunculated and is often called a polypus.

While a tumor remains within the uterine wall its supply of blood is limited, consequently it remains passive or nearly so, becoming hardened and denser, sometimes undergoing calcareous degeneration.

Occasionally the tumor after remaining quiescent for awhile totally disappears, being perhaps absorbed, or torn from its attachment by the uterine contraction and thrown off. Again from some undue irritation or unusual pressure, as in pregnancy, or from some interference in its nutrition during the puerperal state a disintegration of the tumor takes place. Sloughing ensues, the mass liquefies and is passed from the vagina as a purulent discharge, sometimes producing a septic poisoning of the patient. Sometimes from some tissue metamorphosis fibroids lose their density and soften in the interior, having a fluid either serum, blood or pus, contained in a cyst; it is then denominated a fibro-cystic tumor.

The time of the first appearance or beginning of a uterine fibroma is the period of middle life; when the functions of the uterus are most active. They are unknown at puberty, and never develop after the menopause. Emmat says, "Fibroid tumors rarely make their appearance before the age of twenty-five in the unmarried, at a later age in the sterile, and at a much more advanced one with the fruitful woman." The age of greatest liability to fibrous growths for all women is shown to be between thirty and thirty-five years.

"The development of these growths is retarded by child-bearing and even by marriage, for the sterile woman is less liable than the old maid, but in turn she is more so than the woman who has borne children." Between the ages of thirty and forty years the unmarried woman is fully twice as subject to fibrous tumors as the sterile or fruitful. This is one of the tributes which an unmarried woman pays for celibacy.

That uterine fibroma occurs only during the period of sexual activity of the woman, leads to the inference that in some way this abnormal development is connected with, or dependant upon, the exercise of the functions of the uterus.

It is said that a uterine fibroma increases in size during gestation and diminishes after confinement. As they never or rarely ever occur before puberty, so likewise they decrease after the menopause, not immediately, however, but, in the course of time, the uterus atrophies, the tumor diminishes and often ultimately vanishes. The prognosis of uterine fibroma is generally favorable. While they are the most frequent of all the neoplastic growths of the uterus and are the fruitful source of much suffering and distress in many ways both physically and mentally, yet they are perhaps the most innocent, in so far as their tendency is to a fatal issue. By their increasing growth and their pressure upon the organs of the pelvis and abdomen (necessarily interfering with their functions) by the frequent and profuse hemorrhages they occasion, by the poisoning of the general system, from their degeneration, they do sometimes cause death. But on the contrary, they often continue to grow until the cessation of the menses, when "pari passu" with the atrophying of the uterus, they decrease in size and become innocuous, or, as sometimes happens, entirely disappear.

Uterine fibroma threatens life, first by hemorrhage, second by inflammation, third by septicaemia, fourth by pressure. Hemorrhage is the most frequent cause of death; not directly, for it is very seldom that a patient dies from the immediate loss of blood, but most usually they are so much exhausted and emaciated by the profuse and often-recurring hemorrhages, that the nerve centers are so depressed and deranged, the assimilation of food so imperfect, that they become an easy prey to intercurrent diseases, and on account of their lowered vitality and lessened powers of resistance, readily succumb.

Inflammation is sometimes set up in the pelvis by the irritation produced by a fibrous tumor resulting in a cellulitis or a peritonitis, which may end fatally. Sometimes, by some unknown interference with the vital endowment of the tumor, its growth is arrested, it degenerates, decomposes, and septic matter is absorbed into the general system and the patient dies of blood-poisoning. The continued enlargement of the tumor may cause so much pressure upon the pelvic organs as to materially interfere with the discharge of their functions and thus cause death. A fatal uræmia has been produced by the pressure of a fibroid tumor upon the ureters.

Still, notwithstanding these unfavorable terminations, yet the large majority of the cases are amenable to successful treatment, and a fair proportion of them would do well without any treatment.

By the rapid advance made in the past quarter of a century in the treatment of morbid growths of the uterus, both surgical and medicinal, a vast majority of them can be permanently relieved, while the remainder can generally be tided over the eventful period of uterine activity and live long lives of comparative ease and comfort.

The technique of the operations of laparotomy and hysterectomy has reached such a state of completeness, approaching perfection, and the frequent success of the treatment by electrolysis, lead us to hope that (in the near future) these growths will be successfully treated with but little cost of life.

The pathology of uterine fibroids consists of many changes, which are quite interesting, yet natural. The uterus, in its entirety, increases in size, but not always in regular proportion, nor to the same extent in all cases. There are different degrees of enlargement in the different varieties of uterine fibroma.

The increase in the size of the uterus is greatest in the interstitial and submucous fibroids, less in the subperitoneal, and still less when the variety becomes pedunculated.

In not a few cases we have mucous polypi springing up from the lining membrane, and in nearly every case there is an endometritis produced, which results in glandular enlargement and general hypertrophy of the uterus, with increase of its circulation, producing an enlargement of the blood-vessels, and to this pathological change is due the frequent and profuse hemorrhages.

As the tumor grows, its pressure upon the uterus disturbs its position and destroys the axis of the organ, and displacements occur as a necessary consequence; in some there is a flexion, in others a version or prolapsus, and in some the uterus is lifted above the pelvic brim.

The cervix is often changed, either atrophied, hypertrophied, or elongated. I have under my care a patient with uterine fibroma, in whom the cervix is greatly elongated, measuring four inches, and projects beyond the ostium vaginae.

From the pressure of a uterine fibroma the rectum and bladder are greatly disturbed in the discharge of their functions. By their pressure upon the pelvic nerves great pain is produced, and especially is this the case when the tumor becomes cystic. The symptoms of a uterine fibroid are often obscure, and are not often exhibited in the early stages of the formation of the growth. And when present they are generally so vague and undefined as not only to fail to impress the patient, but also to mislead the medical attendant.

The symptoms described are often attributed to some other cause. But as the fibroma grows, the departures from the normal functions are more marked, and the symptoms become direct and positive. The symptoms of uterine fibroma are divided into three classes, according to their peculiar expression.

First, those which are the result of pathological changes taking place in the uterus itself. These are pain, leucorrhœa and hemorrhage.

The pain is usually located in the region of the uterus; frequently, however, it is referred to the back. It is not often severe or persistent, and is most frequently experienced during the menstrual epoch; oftentimes it is attributed to having taken cold.

The pain is a vague symptom, rarely ever well pronounced; is irregular, and sometimes spasmodic. The pain is said to be materially controlled by the situation of the growth, being more often present in the submucous variety and least so in the interstitial.

Hemorrhage is an early and constant symptom, being perhaps manifested at first only by an increased flow during the menstrual period. It is not recognized as a symptom of the disease. But as the growth advances the menstrual function becomes greatly deranged, and hemorrhages are of frequent occurrence. Menstruation comes too often, is too profuse, and lasts too long. The loss of blood in many cases is not so great, yet in all cases it is too frequent, and it may come on at any time. Again, in some cases it is not only too frequent, but is profuse, so much so as to jeopardize the life of the patient.

In uterine fibroma, bleeding is a constant symptom, so much so "that Duncan Matthews called fibroma the bleeding disease of the uterus"—a well-deserved title.

Strange to say, the size of the growth does not influence the frequency or severity of the bleeding—a small fibroma often causing more profuse wasting than a much larger one. It is the situation rather than the size of the tumor. The submucous variety bleeds most freely; next the interstitial, and least the subperitoneal.

The second class of symptoms may be regarded as those caused by the mechanical irritation, produced by the enlarged uterus pressing upon the adjacent organs. The rectum, being unduly pressed upon, is irritated and obstructed, and, as a result, there is constipation and hemorrhoidal tumors. The bladder, from undue pressure, is irritated and disturbed in its function, rendering urination frequent and difficult; sometimes straining and painful, and in rare cases there is retention. The tumor pressing upon the ureters may interrupt the flow of urine and produce disastrous consequences in the kidneys. Finally, the tumor may become so large as to cause the womb to ascend above the brim of the pelvis, and, pressing upon the stomach and diaphragm, materially interfere with digestion and respiration.

The third class of symptoms are those which pertain to the general system; they are remote, and are termed constitutional. They are the result of the too frequent loss of blood, the disturbance of the nutrient functions, and the undue irritation of the nerve centers, which produce anæmia, general debility, with nervous depression and undue restlessness.

These are the rational symptoms of uterine fibroma, and are suggestive but not conclusive. The physical signs are what we are to rely upon in forming our diagnosis; they are enlargement of the uterus, with displacement, and irregular or nodular surfaces, with increased density. The diagnosis of a uterine fibroma is not generally difficult. Usually the rational symptoms and the physical signs are so pronounced as to readily determine the diagnosis. Occasionally, however, the history of the case is so imperfect, and the physical signs so obscure, as to render the diagnosis very difficult.

By the bi-manual examination the uterus is ascertained to be enlarged, changed in shape, and more resistant. It is more flattened than natural, irregular in outline with lack of uniformity; more prominent on one side. In some cases the projection is so bold that the tumor can be readily felt and recognized. In some cases the uterus is uniformly enlarged, as in pregnancy, but it is much harder and more dense. In fibroma, the cervical canal of the uterus is changed in situation—is bent upon itself. In the diagnosis of uterine fibroma we have to differentiate between it and uterine displacements, pregnancy, cellulitis, hæmatocele, and ovarian tumor. Usually in displacements the uterus is not enlarged; its cavity is not lengthened, and it can be restored to its normal position. From pregnancy it is diagnosticated by the history of the case, the absence of softening and discoloration of the os, the shape of the tumor, by ballottement and auscultation. In cellulitis, there is a collection of pus, and by careful examination we detect fluctuation. In hæmatocele, the tumor is not connected with the uterus.

An ovarian tumor is recognized by the history, the situation of the tumor, fluctuation, shortening of the canal, and by being independent of the uterus.

When a fibroma is associated with pregnancy, the diagnosis is greatly embarrassed, but by careful examination it can usually be detected. A uterine fibroma is to be differentiated from an enlarged spleen or liver, or an encysted kidney, by its situation and boundaries, the length of the uterine canal, and by the tumor being continuous with the os.

A small fibroid tumor projecting from the os uteri may be mistaken for an inversion of the uterus, but the passage of the probe will determine diagnosis.

The treatment of uterine fibroma is:

1. Symptomatic, when the treatment is directed to the relief of the symptoms which cause so much disturbance, and endanger the life of the patient. The principal of these is hemorrhage, which is the most disastrous result of uterine fibroma.

For the prevention and checking of the hemorrhage the best means are: Position, quietude, the hot douche, astringents and opiates. Quite a number of internal remedies are recommended, but very few, if any, are reliable. I prefer the gallic acid internally as an astringent, and some form of opium to quiet the nerve centers. Ergot is very highly commended, but has proved useless in my hands. The local treatment consists in the application of cold externally, the injection of astringent and styptic medicines, compression, dilatation and incision of the os, the hot

douche and the tampon. The best of these is the application to the interior of the uterus, the tincture of iodine, the hot douche, and the tamponing of the vagina with cotton saturated with a solution of alum.

2. The general treatment by the internal administration of medicines. This plan is intended to be curative, and a great many medicines have been vaunted from time to time as being capable of causing the absorption or expulsion of the foreign growth. Principal among these may be mentioned: Hydrarg., bichlor., chloride, calcium, the iodides, bromides, and ergot.

There is not a unanimity of opinion in the profession on this point. A majority, however, do not have faith in medicines alone effecting a permanent cure of uterine fibroids. My own opinion is that medicines internally administered are not capable of effecting the absorption or expulsion of a fibroid tumor of the uterus. Ergot is the remedy most usually resorted to for this purpose, but with due respect to the opinion of others, I have no confidence in the therapeutic effect of ergot for anything.

3. The surgical treatment, on the immediate removal of the tumor by means of instruments and appliances.

The surgical means resorted to for the removal and cure of uterine fibroma vary, and may be said to include traction, torsion, enucleation, excision, écraseur, electrolysis, and hysterectomy.

The surgical treatment of uterine fibroma is the plan that we are to rely upon for the permanent relief of the morbid growth, and by these means we can surely and safely remove ordinary growths of the uterus, when the organ returns to its normal condition and the woman regains her health and strength. All the above methods have been successfully used, and each has its own particular adaptation. The écraseur, however, is more generally used than any other instrument for the removal of submucous fibroids that are pedunculated, yet excision with the scissors in this condition is equally safe and more satisfactory. While the écraseur is safe and thorough as a general rule, yet there are objections to the use of this instrument.

Owing to the remote situation of the tumor it is sometimes very difficult, if not impossible, to apply the chain or wire so as to include the whole tumor. And when applied satisfactorily, if the tumor be large, the chain or wire may break before the operation is completed, an accident that would be very annoying, and if the operation should be abandoned for the time being, would subject the patient to the danger of the absorption of pus from the sloughing that would necessarily take place.

"One cardinal rule is to be observed in the treatment of these fibrous growths: We must do nothing to destroy the vitality of the tumor while it is in situ, since we then burden the case with the extra risk of blood-poisoning."

Again, in the removal of a uterine fibroma with a broad base we may accidentally include a part of the uterus within the loop of the écraseur. This has happened.

For the relief of small fibroid growths of the uterus that bleed freely, and are inaccessible, the removal of the ovaries, *i. e.*, Battey's operation, is indicated.

Electrolysis has been used with good results in the treatment of uterine fibroma; it is especially adapted to the interstitial variety. In the subperitoneal variety, when the tumor is pedunculated, and has grown so large as to be irritating to the abdominal organs, removal by laparotomy is the recognized operation.

Hysterectomy is especially adapted to a large and growing fibroid tumor of the uterus when it has attained such a size as to be burdensome to the woman and threatens her life.

Hysterectomy, however, is not to be performed as an ideal operation; but is only to be resorted to to save the life of the patient, as a forlorn hope.

The Polyclinic.

COOPER HOSPITAL (N. J.) NOTES.

SALPINGITIS.

SALPINGITIS frequently results from sepsis or specific infection of the cavity of the uterus. It may also arise from undue traction upon the uterus in operating for laceration of the cervical canal. Not infrequently the history of a case excludes these conditions, and an examination points to a retroflexed state of the uterus as the primary cause.

Retroflexion of the uterus is one of the most common displacements met with in parous cases. The relaxed state of the uterine structures and the pelvic floor; the absence of ligamentous support to the uterus; prolonged dorsal posture and tight bandaging, all tend to throw the uterus into a state of retroversion during the puerperium. When the uterus is carried far enough backward to admit of the intestines resting upon its anterior surface, and the neck of the womb is resisted in its forward displacement by the anterior wall of the vagina, a flexion results which is steadily increased, after the subject gets out of bed, by the superincumbent weight of the intestines, and by atrophy of the uterine wall at the point of flexion. The fundus of the uterus may be driven downward into Douglas' pouch, and firmly held there by the weight of the intestines and by the perimetritic adhesions so likely to form. In cases of retroflexion of a marked character, and especially when complicated with chronic metritis or chronic corporeal and cervical endometritis, the increased secretion within the cavity of the uterus tends to gravitate to the fundus instead of finding its way through the cervical canal into the vagina. In order to expel its viscid secretions, the uterus is obliged in such cases to go into a state of contraction. At the menstrual period, the contractions are prolonged and painful, and amount to a dysmenorrhœa. During the contractions, the secretions that have collected around the fundus of the uterus are forced into the Fallopian tubes and develop a salpingitis or an inflammation of the tubes. This is all the more likely to happen when, from inflammatory causes, the lining membrane of the cervical canal has become thickened, softened, and thrown into folds and resists the efforts of the uterus to expel its viscid contents. The tubes being thus invaded by the secretions of the inflamed cavity of the uterus, their lining membrane becomes congested and inflamed, while the tubes themselves become distended and their peristaltic action impaired. The inflammation may vary from that of a simple form to the closing up of the fimbriated extremity of the tubes by swelling of the mucous membrane or by adhesive peritonitis.—*Godfrey.*

SYPHILIS.—According to the *Rev. Gen. de Clin. et de Ther.*, the following formula may be used by the anus whenever the stomach is disordered:

R.—Iodide potassium.....	15 grains.
Extract of belladonna.....	¼ "
Water.....	4 ounces.

—*Medical World.*

The Times and Register

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PEROXIDE OF HYDROGEN.

IN the current number of the *Asclepiad*, Benjamin Ward Richardson makes a further contribution to the therapeutic uses of this ubiquitous remedy. The author has exhibited in his work such a happy combination of enterprise in experimenting, with conservatism in judging of results, that we place a greater degree of importance upon his work than upon that of most men.

In the present article he confirms a previous favorable report on the use of peroxide in epilepsy. In one case, of thirty years duration, he prescribed two drachms of the ten-volume solution twice daily in water. The attacks were reduced in frequency and in severity from the first; and for seven years the patient kept the remedy at hand, believing that without it the attacks would recur. She employed it occasionally, and eventually recovered completely. Recoveries from epilepsy after so long a period are sufficiently rare to render this case worthy of note. Slight ptialism occurred sometimes while the peroxide was being taken, but the patient stated that she thereby experienced relief from symptoms of cerebral oppression and vertigo. Dr. Richardson advises a systematic trial of peroxide in epilepsy, especially in the Jacksonian variety.

While peroxide has no specific virtue in anemia, it enhances the beneficial action of iron. He gives a grain of ferric sulphate and 1 or 2 drachms of the ten-volume solution, in 2 ounces of water, thrice daily. In one case of pernicious anemia the solution was given in half ounce doses, with very good results. So much benefit is obtained from free purgation in anemia, that he always adds this measure to the chalybeate regimen. Peroxide acts similarly, by promoting the biliary and pancreatic secretions; and may also assist in the absorption of iron from the alimentary canal.

In mensenteric disease and struma, it almost invariably improves the digestion, and renders cod liver oil and iron more acceptable. Children take

peroxide best with glycerine, say 1 drachm each, with 6 drachms of water, and 20 minims of alcohol. Whether the improvement in strumous cases is due solely to the effect of the drug upon the digestion, is uncertain; but in some cases there seemed to be a direct beneficial action exerted upon the diseased glands.

In diphtheria, the peroxide causes a rapid separation of the false membrane, and puts the surface in a favorable condition; but here the benefit ends. It does not remedy the constitutional state, or touch the collapse. He invariably prescribes it locally for the throat and the nostrils, when there is an ichorous and offensive discharge.

Nevertheless, it is certain that if this is properly done, the constitutional condition will be improved and collapse prevented in a great measure. The solution must be used as strong as possible and as often as possible; and if this be done, results will be obtained that are thought impossible by the advocates of the constitutional theory of diphtheria.

In intestinal affections, he has employed peroxide by enema. In cancer and ulcer of the rectum, injections of peroxide with tannin gave good results. In one case of chronic dysentery he used peroxide, one ounce to a pint of tepid water, and tannin in quantity not stated. This was thrown in through a long O'Byrne tube. The recovery was so rapid and sound that the experiment should be repeated.

In scarlatina and measles he employed ozonic ether in ointment as an inunction. The whole body is conscientiously covered with the ointment, the flexures of toes, fingers, and joints being specially cared for. The application removes all odor, and is grateful to the patient, besides lessening the danger of infection.

In eczema, when chronic and obstinate, good results are to be expected from this ointment; or from the aqueous solution combined with tannin or aconite, one or both.

As a diagnostic agent the peroxide is of value, distinguishing pus from mucus readily, whether applied to sputa or to a closed cavity like the bladder. The evolution of oxygen proves the presence of pus.

He suggests the injection of the peroxide into the bowels in typhoid fever; the hypodermic injection of a thirty-volume solution in asphyxia, as after drowning, narcotic, or anæsthetic poisoning. The injections are harmless, and if the fluid be raised to blood-heat, the gas diffuses with rapidity. In sudden collapse from chloroform, when respiration has ceased, this warm solution might be injected directly into both lungs. Pulmonary cavities and early consolidations might with advantage be injected with peroxide. In profuse hemoptysis, the lung could be injected with the solution saturated with tannin. This does not appear to be a very apt suggestion, as other means, such as digitalis, answer perfectly for all cases of hemoptysis, except those due to the erosion of a large vessel; and in the latter case, tannin would be of very little use. Care must be taken not to supersaturate the blood with oxygen, by delivering the solution too fast, or in too large a dose.

The effect of peroxide in relaxing muscular contraction suggests its use in tetanus and hydrophobia. Mechanically, the liberation of the gas may be used to relieve obstruction of the bowels by involution, for distending the bladder before using the sound, and to distend the urethra posterior to a stricture. Perhaps the uterine cavity may be thus distended, and premature labor thereby induced.

In one case of acute pleuro-pneumonia, followed by pleural abscess opening into the bronchi, and consequent hectic, a very ingenious method was employed to supply ozonized and etherized oxygen by inhalation. The action was eminently satisfactory.

Gonorrhœa sometimes resists silver, and peroxide shows the presence of pus. The author employs 1 ounce of the neutral 10-volume solution with 10 grains of tannin and 3 ounces of distilled water. This was employed until the injections returned unchanged.

Tannic acid itself is so valuable in the treatment of gonorrhœa that Dr. Richardson's experiment counts for very little in favor of peroxide. Niemeyer graphically illustrates the powerful action of tannic acid in aborting this disease in its incipency, while in the chronic forms the tonicity imparted by tannin seems sometimes to be the one necessary element in the cure, when used alone or combined with other agents more directly toxic to the gonococcus. It may well be that the peroxide is just this "other agent" that is requisite; and this will be shown by extended experiment. In fact, the treatment of gonorrhœa is too much influenced by the germicide idea. The disease should be treated by the application of such remedies as are indicated for a simple catarrh, varying with the stage and intensity of the catarrhal process, *plus* the appropriate germicide.

Annotation.

THE editor has returned from a month's trip through the West, bringing with him an enlarged comprehension of the marvelous energy of his countrymen, and the pleasantest recollections of his Western colleagues and their hospitality. He advises all his readers who can possibly do so to attend the coming meeting of the Mississippi Valley Medical Association at St. Louis, where they will meet the brightest men in the profession. Go to the meeting, and take your wife with you, and your only regret will be that you have suffered the previous sessions of this Society to escape you.

Recent Work in Obstetrics and Gynecology.

INFECTION Through the Drainage Tube was the subject of a paper by Hunter Robb, M.D. and Albert A. Ghiskey, of Johns Hopkins Hospital.

In this series of sixteen consecutive cases of coeliotomy no antiseptic drugs were employed in the drainage tube or any of its dressings, but a thoroughly antiseptic field was maintained. The authors are so

convinced of the great danger of infection through the drainage tube, that they have made a careful bacteriological analysis, in order to show how far it is possible to maintain a thoroughly antiseptic wound, and under what circumstances infection sometimes takes place. After relating the cases in detail they gave a summary as follows:

In nine cases the cultures were without exception, negative; in six cases a coccus was found growing after the fashion of the staphylococcus pyogenes albus; and in only one was found the staphylococcus pyogenes aureus. These results would lead to the supposition that the staphylococcus pyogenes albus is not so virulent an organism as the staphylococcus pyogenes aureus, and that a septic condition results, as would be expected in cases where the staphylococcus pyogenes aureus is found. To witness such results is to be convinced.

As the drainage tube is thus a source of infection, it is believed that it explains the cause of death in many instances where the patient has died of sepsis on the third or fourth day after operation; but the danger of infection can be reduced to a minimum by the thorough use of asepsis, which saves many lives.

These bacteriological experiments have shown conclusively how difficult it is to be thoroughly aseptic, and yet how important practically it is to maintain an aseptic condition. The technique of the drainage tube is second only in importance to the operation itself, and we believe, as previously stated, that the opinion which many operators hold concerning the drainage tube, is due to their neglect in carrying out the aseptic technique necessary to prevent infection.

MENSTRUATING NURSES (*The Nightingale*).—The question whether menstruation should be regarded as disqualifying a woman for surgical nursing is discussed by the journal mentioned. Some two years ago, a Chicago surgeon made the suggestion that the menstrual discharge rendered the nurse infective, and unfitted her for service in obstetrical cases, and she should be excluded from such work. More recently a New York surgeon substantiated this inference in the presence of a large class, by that saying it was an unwritten law in his practice to exclude menstruating nurses from all major operations.

In arguing against this "unwritten law," which for many reasons must be inoperative, while it is true that the vagina contains bacteria, and that the menstrual blood becomes disintegrated and rapidly offensive, the same is true of perspiration and other excretions, and it would be as rational to exclude every perspiring man from the operating room as to exclude every menstruating woman. Attention is called to the fact that if curetting and other operations can be performed upon the patient during menstruation with safety, it proves the surgical innocuousness of the menstrual discharge.

Prof. Goodell, when questioned upon this point, stated that it had never entered his mind for a moment, and that he could not imagine anything more ridiculous; that for years it had been his custom, in every case, to have the anæsthetic given by a woman, and that there were at the same time four or five female nurses present at each operation. He therefore regards the point as unimportant.

A perfect woman, nobly planned, is indeed lovely to behold. Cosmetics, from being relegated to quacks and drug clerks, should have a prominent place in medicine, and especially in gynecology. By making woman beautiful we make her happy, and render her a source of admiration and pleasure to ourselves.

The term gynecology means a discourse on women. It does not limit to the pelvis. The sooner the conclusion of Goodell is reached, that women have some organs outside the pelvis, the better it will be for the woman. The physician, especially the gynecologist, does wrong when he overlooks the study of the science of cosmetics, for with a knowledge of this he cannot only relieve his patients from the suffering of shame, from disfiguring blemishes, but also guards them from dangerous experiments. The *ars ornatricæ* has been studied as long as woman has been on the earth; but its scientific study remains yet to be developed. Wm. Wood & Co., of New York, have given to American physicians one of their rare treats in the form of a translation of the book "Cosmetics for Physicians and Pharmacists," by Dr. Henreich Paschke, Docent at the University of Vienna. How to make women beautiful must be well understood in Vienna, for Viennese are certainly the most beautiful women in the world.

GYNECOLOGY in Spain has been rather in the background, possibly because the women there are so beautiful that they never get ill. More probably because the men have not the energy of other countries. A committee appointed has found that in the whole country next to no provision has been made for the treatment of women suffering from diseases peculiar to their sex, and they report the urgent need of the founding of institutions for this purpose in Madrid, and in each of the provinces. There is a strong probability of the establishment of an institution in Madrid in the near future, for the treatment and teaching of diseases peculiar to women, with all modern appliances.

OBSTETRICS and gynecology are quite well represented in the report of the Missouri State Medical Society, which is just at hand. This very neat and highly valuable volume contains Phlegmasia Alba Dolens, by L. I. Matthews, of Carthage; Laceration of the Peineum, Chas. W. Adams, Kansas City; The Uterus, Frank A. Glasgow, St. Louis; The Direct Treatment of Diseases of the Tubes and Ovaries, A. V. L. Brokaw, St. Louis; Two Interesting Cases of Abdominal Surgery, C. E. Ewin, Independence; Some Practical Points in Abdominal Surgery, John H. McIntyre, St. Louis; Malignant Disease of the Uterus, Its Diagnosis and Management, Andrew L. Fulton, Kansas City.

PHLEGMASIA ALBA DOLENS is considered by Matthews to have something back of its local and general phenomena, some other grave pathological condition, and it is of more importance to recognize this fact in the management of these cases than the marked local symptoms exhibited, as pain, swelling of the limbs, and the fever that characterizes the disease. If septic intoxication is present, the source of the trouble should be found and removed, if possible. If septicæmia or septicopyemia exists, the best means at our command will be required. The pain in the limbs can be relieved by opium and anodyne liniments, fever by the usual remedies, and for support to the disabled and swollen limbs, smooth and well adjusted bandages are of great value. As near absolute quiet as possible should be enjoined upon the patient. He reported three cases, one of which was interesting from the fact that no septic, cellular, or other localized trouble could be observed, and the onset of the disease could only be accounted for by the too early getting up, or undue exercise. Another interesting feature was the formation of a blood clot in the pulmonary artery, which produced the acute

dyspnoea, and the distressing symptoms witnessed; the weak, rapid, and tumultuous action of the heart, the struggling for breath, and the condition of almost fatal syncope. Granting that there was an embolus or thrombus in the pulmonary artery, the most wonderful feature of the case is that the patient recovered, for these cases die with but few exceptions.

THE Uterus, or rather the various operations on it, is discussed by Dr. Glasgow. The literature referring to the uterus receives attention, also Alexander's operation and fixation of the uterus. Hysterectomy for fibroids he considers an operation firmly established, and is now justifiable in many cases where it could not have been recommended several years ago. He thinks that in a few years the high amputation will be the exception, and total extirpation the rule. The study of the effect of the removal of the uterus and appendages has been carried on more extensively than heretofore. The weight of opinion seems to be that the removal of the uterus has a more depressing effect on the mind than the loss of the ovaries. In fact, ovariectomy has very little effect on woman's nature. Many are beginning to doubt that the presence of menstruation is sufficient cause for the postponement of an operation, a few even contending that it is the best time to operate. Pregnancy no longer offers a barrier to abdominal operations, as patients are found to do very well under these circumstances.

SOME Practical Points in Abdominal Surgery was handled in a pointed, practical way by McIntyre. He thought that he who essayed to do abdominal and pelvic surgery should be so fitted by previous observations and training that when he comes into "action" he will be "ready for anything, and surprised at nothing." He uses but little morphine, as it tends to lock up secretions, and prevent the elimination of morbid material. The doctor much prefers bichloride of methylene, in a Junker's inhaler, as an anæsthetic.

THAT great enterprise, a true illustration of all that is American in energy, talent, and editorial capacity, "The Annual of the Universal Medical Sciences," is again before us. The work done in gynecology and obstetrics throughout the year is noted most carefully, and nothing of any importance is omitted. The labor saving to the practitioner is wonderful. In looking over the work in this department we find that Cincinnati, who has a host of able gynecologists and obstetricians, furnishes much of the wisdom collected by the editors. Below may be found selections from these selections:

DR. ILLOWAY gives the symptomatology of tubal gestation: (a), The symptomatology from the outset of the period of labor; (b), The symptomatology after that period. At the outset there is consciousness of being pregnant, and in from four to ten weeks other symptoms, viz.:

1. Colicky pains in the hypogastrium, usually very violent, preventing standing erect or lying stretched out; skin cold and pale, and covered with a clammy perspiration; pulse small and thready, with occasional vomiting. The suffering may be so great as to produce syncope, often paroxysmal, lasting a few hours or a day, then restoration to health until another attack. These pains rarely occur before the first month, and frequently not until after the fourth or fifth.

2. There may be in addition a fixed grinding pain in the iliac fossa extending down the thigh. Both forms of pain are more severe in the tubal variety.

3. Vaginal hemorrhage having a menstrual character may occur at intervals, or be continuous. We may have symptoms of abortion, or supposed abortion, profuse hemorrhage, with discharge of decidual mucous membrane.

4. Abdominal enlargement to one side, more common in the tubal varieties.

5. Deviation of the uterus from its normal position, occasioned by a tumor located on either side, in front or behind.

6. The tumor being recognized, careful examination shows that it is elastic and fluctuating, and ballottement demonstrates the presence of a solid body within.

7. Vacuity of the uterus is shown by examination of the uterus with the sound.

DR. A. W. JOHNSTONE says: "The placenta develops from adenoid tissue of endometrium, which is ordinarily sealed from contact with the ovum by epithelium, giving a denuded surface. The development of the placenta depends further upon the agency of the sperm cell, which acts as a sponge or skin graft, inducing new formation of new tissue. Exfoliation of the placenta at term is due to the exhaustion of spermatic influence."

In considering the causes of ectopic gestation the physiology of evulsion and impregnation must be discussed. Dr. Zenke says the following theories are generally accepted:

1. That the mature ovum, under normal conditions, is discharged from the Graafian vesicles at the catamenial period.

2. That the ovum is taken up by, or finds its way into the fimbriated extremity of the Fallopian tube, passing through the latter to the womb, there to await further development, or escape with the menstrual discharge.

3. That the ovum may be impregnated shortly before its escape from the Graafian vesicle, or soon after, or within the Fallopian tube, or after its appearance in the uterine cavity.

4. That both the sterile and fertilized ovule may be: (a), Arrested at any point in its course through the tube, or it may be absorbed or developed, as the case may be; (b), It may drop into the peritoneal cavity, there to meet the same fate; (c), A fecundated ovule may traverse the peritoneal space and enter the tube on the opposite side, there to be arrested within its canal, or to find its way into the uterine cavity.

5. It is declared possible by some that the ovum, after its arrival in the corporeal cavity, may, in certain instances, not remain there, but proceed onward and enter the opening of the opposite tube, become fixed there, and develop within the tube or the substance of the uterus. This appears to be far fetched, but may be possible.

6. The Fallopian tube, on the side of the discharged ovule, may be temporarily or permanently paralyzed, either from pressure, or disease, or adhesions, or the lumen of the tube may be occluded from various causes, in any of which cases the opposite tube in a healthy condition may have power to reach over and arrest the escaped ovule.

He gives the causes as usually considered, thus:

1. Shock and terror coinciding with the time of fecundation.

2. Blows upon the abdomen, shortly after fruitful coition.

3. Malformation of tube, paralysis or spasm of it, defective or excessively long tube, engorgement or swelling of its mucous membrane, hardening and re-

traction of the fimbriate extremity, as well as the obliteration of the tube within the uterus.

4. Inflammatory processes within the pelvic cavity, and pressure upon the tube caused by swelling or morbid growth.

5. Desquamative salpingitis.

THE treatment of ectopic gestation was considered by Dr. C. A. L. Reed to be best performed by:

1. Abdominal section.

2. The operation should be done in cases before rupture, so soon as the condition can be presumptively diagnosed.

3. The operation should be done in cases after rupture, so soon as the evidences of internal hemorrhage become apparent.

4. In cases in which the viability has already been reached without rupture, pregnancy should be allowed to advance to term before operation, but under the closest vigilance.

5. In all cases the appendages from both sides should be removed, providing the condition of the patient should justify the extension of the operation.

THE case of a five year old girl who suffered from dysuria is reported by Dr. Ranshofhoff. The dysuria had lasted for three years. A vesical calculus was diagnosed and removed by vaginal lithotomy. The vagina was dilated with a pair of forceps until the anterior wall was freely exposed to view. It was incised for a distance of three-fourths inch, and through the aperture two uric acid calculi, weighing together 101 grains (6.55 grammes) were removed. Twelve hours after the operation the patient had complete control of the bladder, none of the urine escaping per vaginam. Pain on micturition had disappeared. The temperature had, at no time, passed the normal. The author states that while this case illustrates the facility with which vaginal lithotomy can be practiced in the very young for small stones, the operation displayed the defects of the method in removing large stones in very young girls. The danger in such cases from laceration of the bladder and permanent damage to the vagina must make the supra pubic the ideal method.

In the treatment of hyperæmesis, Dr. E. W. Mitchell has used the faradic current as strong as it could be borne for 15-20 minutes for six days. One pole on the abdomen, the other a uterine sound, was carried into but not through the cervical canal. Hemorrhage and abortion followed the sixth application. Dr. Mitchell also reports a case in which the only drug affecting the condition was opium, the vomiting, however, returning as soon as the effect of the remedy wore off.

E. S. MCKEE.

CINCINNATI.

Book Notices.

DISEASES OF THE NASAL ORGANS AND NASO-PHARYNX. By WHITFIELD WARD, A.M., M.D., Surgeon to the Metropolitan Hospital, late Clinical Assistant to the London Throat Hospital, etc. New York and London: G. P. Putnam's Sons, publishers, 1891.

This treatise is of decided merit. The author has succeeded in presenting a book on the subject, which is both practicable and intelligible.

THE MOTHER'S HAND-BOOK: A Practical Treatise on the Management of Children in Health and Disease, with an Appendix containing articles on Diseases and Accidents that may Suddenly Happen to Grown Persons. By LEVIN J. WOOLEN, M.D., pp. 419; Cloth, \$2.25; Library Sheep, \$2.75. Richmond, Va.: Everett Waddey Co. 1891.

Pamphlets.

Evidence of Arsenical Poisoning in the Snook-Herr Wedding Guests. By I. W. Irwin, M.D. Reprinted from the *New York Medical Journal* for August 1, 1891.

The Proceedings of the Organized Meeting, June 10 and 11, 1890, and the First Annual Meeting of the Oregon State Pharmaceutical Association, June 9 and 10, 1891, held at Portland, Oregon; also, the Constitution and By-Laws, the Pharmacy Law and Complete List of Members. Portland, Oregon: The Longshore Printing and Publishing Co., 1891.

Chorea in Relation to Climate, Especially the Climate of Colorado. By S. T. Eskridge, M.D., Denver, Colorado. Reprinted from *The Climatologist*, August, 1891.

Spasmodic Wry-Neck, and other Spasmodic Movements of the Head, Face, and Neck. By Noble Smith, F.R.C.S., Ed., Surgeon to All Saints Children's Hospital. London: Smith, Elder & Co., publishers, 1891.

The Medical Digest.

FOR PERSISTENT DANDRUFF.—Dr. Stephen recommends that we should use a mixture of 3 scruples each of resorcin, olive oil and sulphuric ether, and 6½ ounces of alcohol. To be well shaken, and applied to the scalp by a bristle brush about twice as large as the ordinary mucilage brush, by insinuating it with the locks of hair; the head to be well washed with soap and warm water twice a week.—*Ex.*

IN St. Mary's Hospital is a child about a fortnight old, in whom the sternum and costal cartilages are imperfectly developed. The heart is seen distinctly through the thin cutaneous wall of the chest. The shape and size of the auricles and ventricles, with the filling of the auricles with blood, are quite as visible for all practical purposes as if the organ was completely exposed to view.—*Toledo Med. Compend.*

WATER AS A LOCAL ANÆSTHETIC.—Dr. Sleich, of Berlin, states that subcutaneous injections of distilled water will render the part insensible to pain for several minutes, until the wheal caused by the presence of the water has disappeared. He has employed this method to produce local anæsthesia preliminary to the opening of a carbuncle, and was able to incise the parts deeply, and scrape out the diseased portion without any complaint of pain on the part of the patient.—*Med. Record.*

OINTMENT FOR PRURITUS ANI.—

R.—Hydrargyri bichlorid. gr. jss.
Ammonii muriat. gr. ij.
Acidi carbolici. ʒj.
Glycerini. ʒij.
Aquæ rosæ. q. s. ad ʒvj.

M.—Sig. Apply locally, morning and evening.

—*St. Louis Medical and Surgical Journal.*

INTRA-VENOUS INFUSION OF CHLORIDE OF SODIUM IN HÆMOPTYSIS.—Dr. O. Leichtenstern, of Cologne, publishes the result of his experience in transfusion and intra-venous infusion of chloride of sodium in hæmoptysis. He criticises the works of Schramm and Maydl on intra-peritoneal transfusion, and describes *in extenso* seven cases of his own, in which the infusion of a solution of chloride of sodium had been eminently successful in counterbalancing a most serious loss of blood. The author calls the intra-venous infusion of this salt a veritable life-preserver.

PYRIDIN IN GONORRHOEA.—Pyridin having been strongly recommended as an injection in gonorrhœa by Rademacher, Dr. Dollenberg, of Königsberg, writes to the *Allgemeine Medicinische Central Zeitung* to say he has tried it in all stages, and in several different strengths, with entirely negative results.

MELLIN'S FOOD.—

Mother's Milk.	Reaction.	Mellin's Food.
Alkaline		Neutral.
None.....	Starch.....	Usually none.
3 per cent. to 4 per cent.	Fat.....	2.004 per cent.
I " " 2 "	Albuminoids.....	2.17 "
6 " " 7 "	Sugar.....	3.69 "
.1 " " .2 "	Ash.....	.40 "

That is, the fat and sugar are deficient, while the ash and albuminoids are in excess.—*Canada Lancet.*

At a meeting of the Société de Médecine d'Angers, M. Vaslin contributed a paper on the occurrence of epilepsy long after a fracture of the skull, and when all risk was supposed to have passed away. The production of the fits is ascribed by the author to a detached portion of the bone having been gradually driven under the surrounding bone, and so made to press on the cerebrum. Trephining was performed, the loose portion of bone removed, and the patient made a good recovery.

INJECTIONS OF CAUSTIC POTASH IN EPITHELIOMA.—Professor Rossander, of Stockholm, has communicated to the Swedish Academy of Sciences a detailed account of some interesting observations on the treatment of epithelioma by injections of caustic potash around the tumor, by which four cases were stated to have been entirely cured. This amount of success, in his opinion, rendered it obligatory on him to report the matter to the academy, but he is most anxious to avoid raising too great expectations of the general efficacy of this treatment in the present state of his observations.

ONE WAY TO COLLECT A BILL.—A well-known dentist tried hard to collect a bill, but after many ineffectual efforts said to the debtor: "I do not intend to send you any more bills, and I don't intend to sue you; but there is one thing I want to tell you. Every time you cut off a piece of beefsteak and pass it to your wife, I want you to remember that she is not chewing that beef with her teeth, nor with your teeth, but with my teeth." In two or three days he received a check. The notion of those doubly-false teeth in his wife's mouth was too much for the husband.—*Ex.*

TREATMENT FOR FRECKLES.—A writer in the *Lyon Médical* advocated the following:

R.—Ammonii muriat. 4
Acidi muriatic. dil. 5
Glycerini. 30
Lactis virginal. 50

M.—Sig. The freckles are touched twice daily with a small brush dipped in the above.

As some may not know what lac. virginal is, the formula is here given:

R.—Tinct. benzoin. 1
Aquæ rosæ. 4
Misce bene.

This must be well shaken in order to obtain the milky color characteristic of the mixture.

—*St. Louis Medical and Surgical Journal.*

At a recent meeting of the Société de Chirurgie, M. Kirmission brought forward for M. Boursier two cases of excision of the astragalus. The first operation was performed on a patient, twenty-five years old, who was suffering from pes equinus, and for whom the ordinary operations had proved of no benefit. The second case was that of a child seven years old, who was suffering from congenital equino-varus. Both cases did well; the deformity was decidedly lessened, and the feet made more serviceable.

BENZOATE OF MERCURY IN SYPHILIS.—M. Cochery, in his inaugural thesis, recommends the use of this preparation of mercury as very efficacious, and as being without any inconvenience. It was employed, for the first time, in Russia, by Stoukownkoff, in 1888, and in France by Balzer and Thirloix. It is used as an injection made with chloride of sodium, cocaine, and distilled water, and must be freshly prepared, as a crystalline deposit is soon formed. No gastric or intestinal pains are produced, the salt is rapidly absorbed and eliminated, and the only drawback to its use seems to be that it corrodes the needles easily, and that these, when in this condition, give rise to sharp pain.

ACUTE BRONCHITIS.—The citrate of potassium is a favorite remedy of Dr. H. C. Wood in acute bronchitis; his formula is, he says, the most reliable and efficient sedative cough mixture that he has ever used:

R.—Potassæ citrat. ʒj.
 Suc. limonis. ʒij.
 Syr. ipecac. ʒss.
 Syrupi. q. s. ad ʒvj.

M.—Sig. A tablespoonful four to six times a day.

Another favorite expectorant with this writer is oil of eucalyptus, which may be given in 5-minim capsules every three hours. It is only of use after expectoration is established.

Is it not going into extremes to lay down as a hard and fast rule that no two persons can habitually sleep together without loss of health—that invariably one will thrive and the other loose? Yet it is a curious fact that if a young child sleeps in the same bed with an elderly person the child does not thrive, and no doubt it would be better if the custom of separate beds were more universal. According to a French authority, much of the nervousness or discomfort which people complain of when they rise in the morning is due to the fact that each does not sleep alone, and that there are electrical changes going on in the system during the night which work destructive results to those who sleep together night after night under the same bedding. Whether this electrical bogie is sneaking about under the bedding or in the brain of this authority we do not know.

—*The Hospital.*

IGNIPUNCTURE IN TONSILLAR HYPERTROPHY.—An American surgeon recently advocated the claims of ignipuncture in the treatment of tonsils permanently enlarged as the consequence of chronic or repeated attacks of inflammation. The method comprises the introduction into the crypts and lacunæ of an electrode of suitable size, which is made to penetrate to the full extent, and is then brought to a moderate red-heat. Pain is overcome by the previous swabbing of the tonsil with a ten (?) per cent. solution of cocaine, and not more than three or four punctures are made at a sitting. It is possible that this procedure may be found serviceable when the tonsil

is so situated as to make it a matter of great difficulty, as well as danger, to attempt to extirpate it, and when, from extensive adhesions of the pillars, excision is likely to cause severe hemorrhage. Under ordinary circumstances most practitioners will certainly prefer the less tedious and perfectly safe and satisfactory operation of excision either by the tonsillotome, the écraseur, or the bistoury.—*Med. Press and Circular.*

RABIES FROM SKUNK BITE.—Dr. J. H. Cannon reports, in the *Kansas Medical Journal*, the case of a man who was bitten by an animal supposed to have been a rabid skunk.

The following day, by the advice of friends, he visited a neighboring town and had a celebrated "mad stone" applied three times, but it would not adhere. He was told by the owner of the stone to go home and fear nothing. The wound healed by first intention.

Less than a month later evidences of rabies began to appear. "The marked symptoms were: Complete insomnia from the beginning of the attack, fever, extreme restlessness, irregular attacks of maniacal fury—his fury being directed toward his best friends, complete inability to swallow fluids after the first day, and solids after the second day, rapid exhaustion on fifth day, coma and death." The evidence by which the skunk was implicated is very unsatisfactory.

ANGINA PECTORIS.—R. Douglas Powell (*Practitioner*, April, 1891, No. 274) argues that angina pectoris is a disturbed innervation of the heart or vessels, associated with more or less intense cardiac distress and pain, and a general prostration of the forces, always producing anxiety and often amounting to a sense of impending death. Considerable stress is laid on habitual high arterial tension as a factor in causation. Angina is not necessarily associated with coronary or other diseases of the heart or vessels, although it is true that it fatal cases disease or obstruction of the coronary arteries is the most frequent lesion found, after which in order of frequency come fatty degeneration, aortic dilatation, aortic regurgitation, and aneurism. The author classifies the varieties of the affection as follows:

1. In its purer forms we observe disturbed innervation of the systemic or pulmonary vessels, causing their spasmodic contraction, and consequently a sudden extra demand on the propelling power of the heart, violent palpitations, or more or less cramp or paralysis ensuing according to the reserve power and integrity of that organ—angina pectoris vasomotoria.

2. In other cases we have essentially the same mechanism, but with extra demand made upon a diseased heart—angina pectoris gravior.

3. The trouble may commence at the heart through irritation or excitation of the cardiac nerves, or from sudden accession of anæmia of cardiac muscles from coronary disease—primary cardiac angina.

4. In certain conditions of blood (often gout), or under certain reflex excitations of the inhibitory nerves, always, however, with a degenerate feeble heart in the background. We may observe intermittence in its action prolonged to syncope—syncopal angina.

Treatment.—In group 1, nitrate of amyl, and still more nitro glycerine, are of great value, and may require to be combined with nervine tonics or sedatives, iron, zinc, valerian, bromides, etc. In groups 2 and 3, carminative stimulants, or digitalis with nitro-glycerine, are recommended; and of all tonics arsenic, as a rule, is the best.

IODIDE OF POTASSIUM IN DIPHTHERIA.—"In the *Vratch*, Dr. Semen N. Zenenko, of Nijni-Novgorod, speaks highly of the treatment of diphtheria by iodide of potassium. In adults the drug should be given from 5 to 8 grains every two, three, or four hours, up to a $\frac{1}{2}$ to 1 drachm a day (according to the patient's constitution, the severity of the disease, etc.). In children, from one to fourteen years of age, single doses should range from $\frac{1}{2}$ to 3 grains. The administration should be continued until the appearance of iodism and an incipient separation of false membranes, which usually occurs on the second, third, or fourth day of the treatment. The author tried the method in twenty-eight consecutive cases of undoubted diphtheria, in every one of which the patient made a good recovery. Of nineteen other cases treated at the same place by the ordinary methods, sixteen (84 per cent.) died. As adjuvant means, Dr. Zenenko employed hourly gargling with a 2 or 3 per cent. boric or salicylic acid lotion with glycerine and tincture of geranium or camphorated spirit; further, inunctions of gray mercurial ointment (from \mathfrak{zj} to \mathfrak{zj} twice a day) were used for enlarged cervical and submaxillary glands, while stimulants, quinine, etc., were freely given."—*British and Colonial Druggist*.

TREATMENT OF INCIPIENT PHTHISIS BY THE SHURLEY-GIBBES METHOD.—Mr. J. K., aged sixty-nine years, commenced to fail about ten weeks ago. He coughed constantly, and expectorated much yellow muco-pus, which was sometimes green in color and sometimes streaked with blood. He grew short of breath, his appetite left him completely, and his temperature—normal in the morning—commenced to rise about 9 o'clock A. M., and reached $100\frac{1}{2}^{\circ}$ to 102° in the evening. Then exhausting night-sweats followed. In fact, he had every symptom of consumption; also the physical signs—marked dullness over the apices of both lungs and indications of cavities forming.

Four days after beginning the Shurley-Gibbes injections, his temperature commenced to fall, and in ten days' time was normal. The cough has now almost ceased, and his expectorations are merely white frothy mucus. With the disappearance of the fever, his perspiration ceased and his appetite improved. I consider him practically convalescent, although he has still some indications of tubercular deposits in the lungs. One remarkable thing is the dryness of the respiratory sounds compared to what they were before. He, as well as his family and myself, thinks he has been lifted out of a consumptive's grave.

—Bryan, *Med. Age*.

THE KNEE REFLEX IN EPILEPSY.—Dr. Vasilieff, though not the first to notice the fact that epileptic attacks exercise changes on the knee tendon reflex, has made a slight addition to our knowledge on the subject by a series of experimental investigations, carried on in the laboratory with the help of Marey's chronograph and Bekhtereff's reflexograph, the subjects being dogs thrown into epileptic convulsions by electrization of the cerebral cortex. In the tonic period of the attack it was found to be impossible to excite the reflex, owing to the rigid state of all the muscles; in the succeeding clonic stage, however, the phenomenon was well marked. After a violent fit, accompanied by loss of consciousness, the tendon reflex was usually either entirely absent or very deficient in strength, the change occurring within a few seconds at latest after the clonic spasms had ceased. The length of time during which the re-

flex was absent varied from one to twelve minutes, and it did not regain its normal force for a good while; in some cases not for half an hour or more. Sometimes, however, after it had become normal, a temporary increase in the force of the reflex was observed. It has been noticed by Dr. S. N. Danillo, too, that the knee reflex was absent in dogs in which epileptiform fits had been produced by absinthe. Dr. Vasilieff thinks that these observations may be of value in diagnosing true from spurious epileptic attacks. His paper, as well as those by Prof. Bekhtereff and Dr. Danillo, dealing with the subject of the knee reflex, are published in the *Vratch*, Nos. 16, 22, and 26, 1891.—*Lancet*.

BAD MIDWIFERY.—I am persuaded that the most frequent cause of the retention of secundines, in labor at full term, is mismanagement of the third stage. Physicians, as a rule, are too impatient at the necessary delay in uterine contractions after the delivery of the child. The long-continued contractions of the uterine muscle, together with the last throes of labor, exhaust temporarily uterine contractility, a beautiful provision of nature whereby the placental circulation is maintained until the child shall breathe freely, and thus the sources of oxygen be changed from the placenta to the lungs. If, during this state of uterine inertia, attempts are made to deliver the placenta, as is too frequently done, it is torn prematurely from its attachments to the uterine walls, and fragments of the secundines are left behind, which become the source of after-complications.

Unless there be *post-partum* hemorrhage, or some other positive indication for interference, attempts to deliver the placenta should never be made until spontaneous uterine contractions have torn it from its attachments and expelled it into the vagina. When physicians generally learn this valuable lesson, *post-partum* complications, tardy puerperal convalescence, and cases of chronic invalidism, resulting from mismanagement of the third stage of labor will be much rarer than at the present time.

—Ferguson, *Ind. Med. Jour*.

NOTES ON THE MANAGEMENT OF THE THIRD STAGE OF LABOR.—The uterus in all cases should be allowed to rest after the birth of the child unless hemorrhage sets in. "No hemorrhage, no hurry," is an axiom I have always acted on and taught students. The expression of the placenta by intermittent pressure or kneading I hold to be a mistake, as it converts the uterus into a bottle syringe, and pumps out blood without detaching the placenta (should it be even only partially adherent). The traction on the funis, though condemned by most authorities, I have found to do no harm, provided steady grasping pressure is applied at same time to uterus with other hand.

We are all aware that a common cause of delay in the third stage of labor is the atmospheric pressure, but if traction on the funis backward be made while steady grasping pressure is applied to uterus we shall be able to know at once if morbid adhesions exist, as the delay, if due to the previous cause, will at once be overcome.

The elastic feel of funis when traction is made will also prove a most useful guide.

It is important to remember, while making pressure over fundus, that if this is not judiciously done it will occasion much unnecessary pain to the patient, the ovaries lying in close proximity to the uterus, and liable to be included in the grasp of attendant.

When it becomes necessary to deliver the placenta manually it is most important that the uterine cavity should be directly afterward well flushed with hot water (previously brought to boiling point). This will remove shreds of membrane or portions of placental tissue, which, if left to remain, would, without doubt, become a source of danger to the patient, and an avoidable cause of anxiety to any conscientious practitioner. Should the flushing fail to remove *all*, and if anything is felt protruding from the os, a blunt curette, or what I have found most useful, a plated marrow spoon, the concavity of which fits the finger, and can be introduced without pain to the patient, will loosen any small portions of placenta still adherent, and the flushing should then be resumed till water returns clear. In *all* cases, while flushing the cavity, the hand of either nurse or doctor should be applied to uterus, and pressure made as the tube is withdrawn, the dorsal decubitus being the best position.—Duke, *Hosp. Gazette*.

ARTIFICIAL MODIFICATIONS OF CLIMATE.—It is a significant fact that the oldest portion of the city is well furnished with magnificently-wooded squares, having Independence, Franklin, Washington, Rittenhouse and Logan Squares, all within Vine street and South, while in the newer portions there are practically none of these open spaces, unless we count the cemeteries, the Girard College grounds, and similar institutions.

Some splendid opportunities still exist for locating green and blossoming spots in the denser sections. Girard avenue, a portion of South Eleventh street, and, when the old market houses shall finally be removed, portions of Callowhill and Second streets, all offer themselves to better uses than a wide and meaningless expanse of Belgian blocks.

A rounded or oblong space for ornamental vegetation, and a small fountain at each corner of the wide pavement surrounding the City Hall, would materially enhance the beauty of the place, and serve to temper the atmosphere.

Where the oblique streets intersect simultaneously a north and south and an east and west running street, a good instance being Broad street, Fairmount avenue and Ridge avenue, a large space is found which could be utilized for trees, shrubs or grass.

For planting along the sidewalks careful choice should be made of such trees as will not grow too high, or spread their branches too widely. With proper precautions in selection there are but few of the main streets, outside of the business center, which could not be thus utilized for equalizing the temperature and humidity of the atmosphere, as well as for enhancing the beauty of the city.

I conclude with these propositions:

1. The climate of a country, of a State, or of a municipality, can be affected by its policy.
2. Legislative measures, stimulating favorable and repressing unfavorable modifications of climate, are worthy the attention of law-makers.

—Wolfe, *Annals of Hygiene*.

CASCARA SAGRADA IN HABITUAL CONSTIPATION.

—Cascara sagrada was brought to professional notice about the year 1878. In small doses I find it has a tonic action. It gives tone to muscular tissue, and exerts some influence on the liver. In large doses it is purgative, acting specially on the large intestines. It increases the intestinal secretions, and also the peristaltic action of the bowels. The extract of beladonna and purgatives increase its action. I have, during the past year and a half, prescribed cascara a

great many times, and have found it a reliable and valuable medicine. It is chiefly in chronic constipation that I prescribe cascara. In habitual constipation, it is one of the very best laxatives we possess. To persons of a sedentary occupation, with constipation and general sluggishness of the bowels, the administration of the fluid extract of cascara sagrada, in small doses, will generally be very beneficial.

I usually give the fluid extract in from 20 to 30 minims, in a little coffee, night and morning, until it begins to act, when I diminish the dose, and also omit giving it in the morning. Some persons may object to taking the fluid extract on account of its bitterness. To such persons I am in the habit of giving the cordial of cascara, and I think that it is also better suited for children and babies. The only reliable preparation that I have been able to find is that made by Parke, Davis & Co., of Detroit, Mich. Their preparations of the fluid extract and the cordial have given me entire satisfaction.

It is well to remember that the medicine is to be used in small doses, and special attention should be given to see that the preparation is reliable. I have been disappointed two or three times in the use of what proved to be poor preparations.

—Rogers, *Med. Monthly*.

EARLY RECOGNITION OF TUBERCULOSIS IN CATTLE.—A most remarkable observation has recently been made by M. Léon Mandereau, of Besancon, which, if corroborated, must alter very considerably our ideas on the subject of the distribution of the tubercle bacillus in generalized and local tuberculosis. This observer removed from the eyes of cattle that had succumbed to tuberculosis a drop of the aqueous humor, stained it according to Ehrlich's method, and found that the characteristic tubercle bacilli were present, sometimes in small, but always sufficient numbers to be readily identified. This opened up the way for the early diagnosis of tubercle, and M. Mandereau made careful examination of more than a score of animals suffering from tuberculosis in various stages. As he expected, he found the bacillus in the aqueous humor in all cases where the condition was generalized; but, more remarkable still, he found them even in those cases where the disease was confined to the lungs and pleura, and even when it was present only in the liver.

This being the case, the diagnosis of tuberculosis could be made comparatively easy during life. This observation is so startling that much hesitation must be felt in accepting it; though made in perfectly good faith, it may be nullified by some undetected fallacy; and until it has been shown that all sources of fallacies were eliminated, it will be well to suspend final judgment. Should it prove to be true, it would be difficult to understand how Cohnheim and Salomonson's experiments on the production of intra-ocular tuberculosis are to be explained, if tubercle bacilli in the anterior chamber, when introduced naturally along the lymphatics, do not give rise to any marked symptoms of tuberculosis. Of course, here it may be argued that a wound of tissues was produced, and that the conditions are, therefore, not the same. Another point for consideration is that, if these observations be correct, we shall have to revise all our notions as to the presence of tubercle bacilli in the blood and lymphatics of the system generally, even in cases of localized tuberculosis—conditions in which it has been held that tubercle bacilli were localized not only in their action, but also in their distribution. If the wound theory is to hold good at all, we should ex-

pect to find that after puncture of the cornea for the removal of the fluid, the tubercle nodules should make their appearance in the eye; and if these nodules do not occur, it is certainly presumptive evidence that tubercle bacilli are not there. Of course, upon such a point as this depends the possibility of the application of the method, even if other observers are able to substantiate M. Mandereau's observations.

It is not now necessary to consider this question as regards the human subject, except in those cases of acute general tuberculosis which frequently are indistinguishable from enteric fever or certain forms of pneumonia; in such cases it might be valuable; but to the veterinary surgeons, who in their examination of cattle have to contend with numerous, and up to the present almost insuperable, difficulties, it would be of great value.—*British Medical Journal*.

WHAT SHALL BE DONE FOR A COLD IN THE HEAD?—It may not be always possible to break up a cold. Sometimes during the congestive stage anything which will allay irritation will suffice. The person who feels a cold coming on should instantly betake himself to bed, drink a cup of hot ginger tea, and make use of a snuff like that which was proposed several years ago by Dr. Ferrier:

Morphinæ sulph..... gr. j.
Bismuth subnit..... ʒiij.
Pulv. acaciæ..... ʒj.—M.

The insufflation of a little morphine at the commencement of a cold in the head is sometimes attended with very happy results. Quinine as an abortant in commencing cold is much in use. The dose should be somewhat large; Dr. T. J. MacLagan says 10 grains. Its efficiency is, however, rather problematical. Doubtless, menthol is one of the best local applications in the early stages of coryza. It may be used in the form of an ointment (menthol 1 part, vaseline 30 parts), or as a spray with liquid alboline. A formula which may do good service is the following:

Menthol..... 1 part.
Liq. alboline..... 30 "

A special spray atomizer, such as sold by all the instrument makers, is needed for the effective use of this combination. Menthol seems to limit congestion to the mucous membrane. It is often followed by a profuse flow of nasal mucus, with little sneezing. Breathing through the nose and mouth the steam of hot camphor-water, and the internal use of carbonate of ammonia are also recommended, and there is often utility in the production of active diaphoresis. Many of late years have claimed decided benefit from full doses of antipyrine, acetanilide, phenacetine, in the onset of cold, and doubtless these new remedies are more and more taking the place of the depressant diaphoretics.

—*Boston Medical and Surgical Journal*.

DIPHTHERITIC PARALYSIS.—We all remember that diphtheria, like scarlet fever, leaves our patient very anæmic and prostrated. It does so because of its poisonous effect in the blood. Hence, we will treat this case in two ways: preventive, that is to limit the extension of the paralysis, and, second, curative. The best authorities agree that by keeping our cases of diphtheria, however mild, in bed, and quiet for a week or ten days after the acute symptoms have subsided, we will prevent many cases of paralysis, for the exertion of an anæmic child naturally favors its occurrence. We will, therefore, instruct this child's

mother to place her in bed, and keep her there for three or four weeks. In the meantime we will insist on her being fed at regular intervals, every three hours, on bread and milk, made thick so as to form a semi-solid. You will recollect the fact that she can swallow soft or semi-solid food better than fluids. Rice pudding, junket, mutton broth, beef soup made thick, extract of malt on her bread—these must be given her regularly every three hours. She may have, in addition, fresh fruit and vegetables, baked potatoes occasionally. Massage in these cases improves the general nutrition wonderfully; it favors peristalsis and promotes digestion and assimilation. Warm salt baths daily given act kindly also. For the medicinal treatment we will order a pill, because she can swallow it best, containing the following:

R.—Strychninæ sulph..... gr. $\frac{1}{30}$.
Ferri redact..... gr. j.
Quininæ sulph..... gr. $\frac{1}{2}$.
Ac. arseniosi..... gr. $\frac{1}{30}$.

M.—Ft. pil. No. j.

Sig. One three times a day.

This will be best administered in a little apple sauce or jelly. If the child shows no marked improvement on this, we will commence to give strychnine, $\frac{1}{10}$ grain hypodermically. We will give this daily. This is especially indicated in pharyngeal paralysis.

—*Hollopeter, Med. Bulletin*.

AN IMPROVED METHOD OF GRAFTING ULCERS.—Having had an exceptionally large number of chronic ulcers of the leg, which incapacitated the patients from work, and finally brought them into the infirmary, I tried the ordinary methods of grafting, but being disgusted with the very large numbers of total failures I experienced, I undertook various experiments, and at last adopted the following plan, which I distinctly disclaim as my own, but which consists in adopting and combining the ideas of several people. The success I obtained with this method was so marked that I think a large number of practitioners at home and abroad (in India especially, where I found all ulcers very intractable under ordinary treatment) will welcome it. Even when the ulcer is deep, with hard, thickened edges, and extending all around the limb, the method applies. This is to cleanse the surface well for two or three days with boracic fomentations, and then (contrary to what I was taught) slightly abrade the granulations, just sufficient to cause oozing, and apply the graft directly to the abraded surface, where it is held in position, a small pile made of half-inch squares of green protective, four or five squares being placed one on the top of the other. A graft is thus applied to every square inch of surface. And now comes the most important thing of all, and which is an idea I received from a friend. This is to encircle the limb with a fold of carbolic gauze, which extends two or three inches above and below the ulcer, where it is attached to the sound skin by collodion. The ulcer is then thoroughly dredged with boracic powder through the gauze, and the whole is wrapped in a layer of wet boracic lint, which is kept thoroughly moist. As a rule, the dressing is not disturbed for three days, when the lint is removed, and the limb well irrigated with boracic lotion, the grafts remaining perfectly secure under their heaps of protective, which again is kept in position by the gauze. The limb is then redusted with boracic powder, and done up in the wet lint, which is now changed daily. At the end of ten days the gauze and protective are removed, and each graft will be found as large as a sixpence, while those near

the edges will have exercised a spermatic influence, and caused a rapid ingrowing of epithelium. Since adopting the above plan, I may say I never lost a single graft, though employed on most unfavorable surfaces—a very different result to the old way of covering the grafts with a large piece of protective which retained some exudations under it, and thus bathed the tender graft in a poisonous medium, with a result that 80 per cent. of them never “took.”

—Gill, *The Lancet*.

TREATMENT OF EPILEPSY.—Under this head Poulet, of Placna les-Mines, in *Bulletin Général de Thérapeutique* writes of a combination of bromide of potassium with Calabar bean, which has given him success in the treatment of obstinate cases of epilepsy where the bromides alone had failed. A favorite formula of his is:

R.—Bromide of potassium.....	100 parts.
Tincture of Calabar bean.....	35 “
Water	470 “

Sig. A tablespoonful, to be increased to a tablespoonful and a half, then two tablespoonfuls, daily.

A tablespoonful contains about 57 grains of bromide, and about 16 minims of the tincture. The medicine may be given in divided doses instead of in one full dose, half a teaspoonful being given at first twice, then three times, then four times a day.

Poulet reports five obstinate cases treated in this manner. These were cases where bromide alone failed to cure:

1. The fits were formerly six or eight a week (*grand mal*). After a year of the new treatment, no return of the epilepsy. In this patient the tincture of Calabar bean is occasionally replaced by eserine in the dose of $\frac{1}{8}$ of a grain to each 15 grains of bromide; the result has been the same. No contraction of the pupil has been observed during the administration of the medicine.

2. A most obstinate case; had been epileptic for eight years, eight or ten fits a day. Failure of bromides given alone, also of bromides and picrotoxin. Definitive cure under bromides associated with tincture of Calabar bean.

3. Also a case of chronic, inveterate epilepsy. Several months' treatment by the combination specified gave exemption from all convulsive accidents.

4. A case of grave epilepsy at the menopause; frequent daily vertiginous attacks ending in convulsions and stupor. At first the disease was successfully combated by bromide of potassium associated with picrotoxin; this combination afterward failing, sulphate of atropine was substituted for picrotoxin (90 grains of bromide of potassium, and $\frac{1}{8}$ of a grain of atropine daily). The latter treatment has been kept up for a year, with complete cessation of the vertigo.

5. A case of cardiac epilepsy; the *grand mal* attacks were followed by hemiplegia with stupor and hebetude (*état de mal*). A combination of bromide and digitalis caused disappearance of the epilepsy (120 grains of bromide associated with 30 minims of tincture of digitalis in divided doses daily).

Poulet terminates his article by the following conclusions:

The bromides remain the sheet-anchor in the treatment of epilepsy—and by the term “bromides” we have especial reference to the bromide of potassium, which alone is truly efficacious.

There are, however, a great many epileptics whose attacks are only mitigated or postponed, not completely suppressed, by bromide of potassium.

In such cases, if we associate the bromide with some medicament which possesses properties identical with those of the bromide (that is, being capable of anæmiating and de-congesting the nerve centers, and paralyzing the system of voluntary muscles), we generally attain results which are perfectly satisfactory in essential epilepsy, and even in partial or Jacksonian epilepsy, on condition that, in the latter, we begin by the specific treatment of the determining cause. The substances that have been most successful are Calabar bean, picrotoxin, and belladonna. In cardiac epilepsy, digitalis must be added.

We may indifferently substitute sulphate of eserine for the preparations of Calabar bean, sulphate of atropine for those of belladonna, and digitalin for digitalis.

—*Am. Jour. of the Med. Sciences*, September, 1891.

THE DIPHTHERIA PROBLEM.—From all parts of the world come reports telling of the increasing ravages of this fell disease, which, in spite of the attentive study and observation of which it has been and is still the object, continues to elude the searcher after truth so far as its etiology is concerned. The disease is one of those which does not appear to be influenced to any marked extent by climate. It claims its victims in regions widely separated, not only by intervening space, but by climatic and general conditions. In fact, up to the present, no one has been enabled to alight upon any association of conditions which can be said to be necessarily associated with its appearance and propagation. Its incidence in various countries varies immensely, and the same curious difference is observable in adjacent parts of the same country, where, of course, the general conditions are the same. So far as statistics go they seem to prove that sanitary reforms which procure an immediate diminution in the mortality from other specific diseases are without effect on the spread of diphtheria. It is possible, however, that this discrepancy is more apparent than real, and that the explanation of its uninterrupted progress is to be found in the inadequacy of the means employed to prevent its propagation by direct personal infection. Insanitary conditions seem, as might be expected, to create a predisposition to the malady, but apparently they do not directly cause it, nor does the opposite condition afford much protection against its onslaught. The importance of direct contagion as a factor in the production of epidemics is evidenced *inter alia* by the prompt and excellent results that follow stringent measures for the disinfection or destruction of infected rags, etc., and the isolation of the sick. There is little reason to doubt, too, that the aggregation of children in schools tends to facilitate its dissemination in spite of the fact that the contagion of diphtheria is very much less readily transferred than in the case of scarlet fever or measles. It is suggested, indeed, that the play-ground is the place where the disease is most likely to be propagated, hence that in epidemics it would be sufficient to close the grounds instead of the schools. If, however, children are allowed to play elsewhere the result would probably be the same. Dampness of soil and houses has been described as a predisposing agent, and this has led certain observers to attempt to demonstrate a relationship between the movement of the subsoil water and out breaks of diphtheria. Unfortunately for these and similar theories, while they may fit in admirably with this or that particular epidemic, they usually fail to account for others. With respect to the alleged indifference of the disease to sanitary conditions, it is worthy of

note that this is not the case everywhere. In Belgium, for instance, the curve of diphtheria is, with few exceptions, the same as that of typhoid fever. Our knowledge of this disease is really of such recent date that it is hardly possible as yet to eliminate the influence of various disturbing factors. Not many years since diphtheria was a comparatively rare disease, if the diagnostic powers of the then practitioners are to be trusted. Unfortunately, however, circumstances do not justify this implicit confidence. Within the last ten years we have learned a great deal in respect of the disease, and at the present time the error, formerly in the direction of a wrong nomenclature, is probably in the opposite direction. Medical officers of health complain of the large number of cases returned as diphtheria which formerly would have been ascribed to tonsillitis or quinsy, and the increase in the mortality from the disease has to some extent coincided with a diminution in the number of deaths ascribed to diseases of which diphtheria may be considered to have taken the place in our nosology. In the course of a few years, some of these disturbing elements will have disappeared, and we shall be able to institute comparisons with less risk of erroneous deductions. The moment is opportune for inaugurating comprehensive inquiries in the various countries where the disease is endemic with the view of endeavoring to ascertain what are the conditions common to epidemics everywhere. It is difficult to believe that there are none such, and this knowledge would materially assist us in circumscribing its ravages. Such inquiries would best be carried out by the respective Governments, and the results might be collated and their bearings discussed at some future congress. The element of individual susceptibility must not be lost sight of; but this susceptibility is, after all, only part of the general etiological conditions respecting which further knowledge is so much to be desired. The same remark applies to its dissemination by domestic animals, a source of infection which may now be considered as proven. Even if we remain unable to prevent outbreaks here and there, recent observations on the propagation of the disease by milk, etc., authorize the hope that means may be found of preventing these outbreaks, degenerating into epidemics; and when that is possible a great progress will have been accomplished.

—*Med. Press and Circular.*

FRENCH NOTES.

A. E. ROUSSEL, M.D.

INOCULATIONS AGAINST YELLOW FEVER (M. Domingos Freire).—From 1883 to 1890, 10,881 persons were vaccinated, as follows:

		INOCULATIONS.
From 1883 to 1884	.....	418
" 1884 " 1885	.....	3,051
" 1885 " 1886	.....	3,473
" 1886 " 1887	.....	3,576
" 1887 " 1888	.....	363

The mortality of those inoculated and constantly exposed to contagion, who have subsequently contracted the fever, is 0.4 per 100. The mortality among those not inoculated has been from 30 to 40.9. The inoculated patients resided in these localities where the malady was observed in its greatest intensity, not only at Rio de Janeiro, but also in other cities.

—*La France Médicale.*

THE LEGIBILITY OF PRESCRIPTIONS.—The Minister of the interior of Austria has officially notified the burgomasters of all the communes that they shall

exercise a vigorous observation regarding the legibility of the prescriptions of the practitioners placed under their jurisdiction. They shall assure themselves that all prescriptions are clearly and legibly written, so that there shall be no doubt of the nature and dose of the remedy intended, nor of the signature.

—*Revue de Thérapeutique.*

MEDICAL SPECIALISM IN RUSSIA.—The Council of Medicine, and the Minister of Public Instruction of Russia, have been considering the question of reform in the examination for the degree of Doctor of Medicine. It appears that it has been unanimously demanded that there should be added to the title of doctor the *indication of the specialty* which the physician is following. There will be ten recognized specialties.

—*Gazette de Gynécologie.*

PREPARATIONS FOR AFFECTIONS OF THE THROAT AND LARYNX (Lennox Browne).—

Inhalations.—

R.—Creosote.....	4	drachms.
Carbonate of magnesia.....	1½	"
Distilled water.....	2½	ounces.

One teaspoonful to half a pint of boiling water. This inhalation is stimulating, and useful in chronic congestion of the larynx, as well as in chronic catarrh.

R.—Oil of eucalyptus.....	1 to 3	drachms.
Carbonate of magnesia.....	½ to 1½	"
Distilled water.....	2½	ounces.

This constitutes an agreeable stimulant, and possesses a soothing effect in subacute inflammations.

Pulverizations.—The dose prescribed in each formula is the maximum to be administered at each *séance*. In the catarrhal period of tuberculous laryngitis, Lennox Browne prescribes:

R.—Carbolic acid.....	7½ to 15	grs.
Borate of soda.....	1	drachm.
Laurel water.....	12½	fl. drs.
Distilled water.....	112½	"

He considers the following formula as very useful in diphtheria, and uses it to the exclusion of all other local treatment:

R.—Lactic acid.....	1 to 2	drachms.
Distilled water.....	8	"

There should also be applied to the throat equal parts of the acid and water by means of a brush.

Applications.—For light forms of chronic pharyngitis we prescribe:

R.—Iodine,	
Carbolic acid,	
Iodide of potassium.....	āā 4 grains.
Glycerini.....	4 drachms.
Distilled water.....	8 "

Or, in cases of congestion of the naso-pharynx, or glandular pharyngitis:

R.—Iodoform or iodol.....	1	drachm.
Ether.....	8	drachms.

The iodol has the advantage of being inodorous, but it is less active.

R.—Compound tincture of benzoin,	
“ “ “ camphor.āā	8 drachms.
Tincture of belladonna.....	½ drachm.

Mix and add yolk of egg No. 1.

This preparation is very useful in buccal and lingual tuberculosis in applications immediately before meals. Cocaine may be added.

Pommades.—

R.—Oil of eucalyptus.....	20 drops to 1	dr.
Vaseline or lanoline.....	8	drachms.

This pommade is antiseptic. It maintains the moisture of the mucous membrane in dry rhinitis.

R.—Hydrochlorate of cocaine..... 5 grains.
 Oil of eucalyptus..... 20 drops.
 Vaseline or lanoline..... 8 drachms.

This pommade is useful in congestive nasal affections, as well as for the removal of polypi, and as a calumative in attacks of hay fever.

R.—Saccharine,
 Bicarbonate of soda.....āā 15 grains.
 Salicylic acid..... 1 drachm.
 Alcohol..... 50 drachms.

For fetid breath, gargarize with a few drops of this mixture in a glass of water.—*La Médecine Moderne.*

POST-MORTEM ACCOUCHEMENT.—Mrs. M. W., aged twenty years, far advanced in pregnancy, died suddenly, one day recently, at five o'clock in the evening. On account of the late hour the husband did not report the death until the day after, when, at 2 o'clock, a physician examined the corpse, and on account of the great heat of the weather he ordered that the inhumation should take place on the same day. At 7 o'clock, when the undertaker appeared, he was astonished to find an infant alongside of the cadaver of the woman. The corpse had given birth to a lifeless child about twenty hours after death. The facts are established by the physician.

—*Le Progrès Médical.*

GERMAN NOTES.

HERMAN MARCUS, M.D.

TREATMENT OF SMALL CYSTS WITH INJECTIONS OF CHLORIDE OF ZINC.—According to the size of the tumor 0.2–1.5 ccm. of a 0.1 proc. chloride of zinc solution should be injected. These injections are painless. The cyst becomes then harder, later soft, and shrinks after four or five weeks. After this small operation, a pale cedema is seen, sometimes a slight hyperæmia of the surrounding skin; Priessnitz's compresses may be used with great advantages for this cedema. Landerer reports cured: Three simple ganglions on the back of the hand, two diffused tumors of the sinews on the back of the hand, one hygroma præpatellare, one hydrocele of the size of an egg, in a man fifty-six years old. The treatment is *tuto jucunde*, but moderate *cito*.

—Landerer, *Munchner Med. Wochenschrift.*

THE ACTION OF BENZINE AFTER EATING PORK CONTAINING TRICHINÆ.—Dr. Puetter, Jr. (Stralsund), reports: During the summer 1890, twenty-seven persons ate of a freshly killed hog. A few hours afterward it was found that the animal contained quite a number of trichinæ. All twenty-seven persons, partly adults, partly children between fourteen and seventeen years old, ate of the cooked ham, while five of them (females) ate, while preparing some of the meat for sausages, of the uncooked meat. The same evening Puetter was called in and prescribed R.—Benzoli, gr. viiss, ad. caps. gelat., No. 270. Sig. 10 capsules as directed. He ordered that every one of these twenty-seven persons take five capsules on an empty stomach the next morning, to be followed after an hour, by a teaspoonful of pulv. rad. rhei. and pulv. liqu. comp. (āā), the children in proportion to their age. On the afternoon to be repeated (five capsules and a teaspoonful of the powder). The next day only the powder should be used. The benzine was taken by all without any ill effects. All were cured.—*Deutsche Med. Wochenschrift.*

TREATMENT FOR TAPE-WORM.—Dr. S. Stein recommends the following: Firstly, let your patient, two days before beginning actual treatment, eat of

only such things which make a small amount of excreta, also give daily a glass of Hunyadi water. On the morning of the third day the patients get the anthelminthicum, the extr. filic. maris. aeth. in gelatin capsules, gr. viiss at a dose. Sometimes smaller doses may do. Stein generally uses sixteen to twenty of such doses inside of two hours, followed after another two hours with a laxative (castor oil preferred). Excellent results are claimed for this treatment.—*Pest. Med. Chir. Presse.*

ICHTHYOL.—Stocquart (*Arch. de Méd. et de Chir. Prat.*), found that Ichthyol, taken internally in solution (gr. ivss–gr. xvss), is an excellent remedy in the treatment of vertigo and headache due to dyspepsia. He claims it as superior to bromide of potassium.—*Deutsche Medizinal Zeitung.*

URTICARIA.—Quinquand treats urticaria as follows: Alkalies internally, and if unsuccessful, arsenite of sodium or naphthol is used. Against the itching he recommends either of these two prescriptions:

R.—Acidi borici..... 3vij, gr. xlij.
 Chloral. hydr..... 3j, gr. xv.
 Aq. dest..... 3vj, 3v, gr. xij.

M.—S. Use as wash externally.

Or:

R.—Acidi salicylici..... 3j, gr. xv.
 Zinci oxidi..... 3ij, gr. vj.
 Amylii pulv..... 3viiss.

M.—S. Use as powder externally.

—*Deutsche Medizinische Wochenschrift.*

CHROMIC ACID IN EPISTAXIS.—Pogorielsky recommends the use of chromic acid in the treatment of epistaxis. He cured one obstinate case by touching the hyperæmic portions with crystals of chromic acid which had been molten on a platinum wire.

—*Wiener Med. Wochenschrift.*

ERYSIPELAS.—Dr. Trapesnikow (*Russk. Med.*) has used carbol in the treatment of erysipelas, as recommended by Eichhorst, in twenty cases. The results were very satisfactory. Cures were effected inside of from six to ten days in cases in which treatment was begun four to five days after the disease appeared. The treatment was:

R.—Acidi carbolic. gr. xxx.
 Ol. terebinth..... 3vij, gr. iij.

M.—S. Apply to parts hourly.

—*Deutsche Med. Zeitung.*

FACIAL ERYSIPELAS.—Dr. Hochhalt recommends the applications of ichthyol, in 2-per-cent. solutions, in the treatment of facial erysipelas. He claims cures in from three to four days.—*Pest. Med. Chir. Presse.*

MENTHOL AGAINST VOMITING.—Lahnstein used menthol in a child suffering from traumatic peritonitis to relieve the vomiting. Opium and morphine showed no influence.

He used:

R.—Mentholi..... gr. xv.
 Sp. vini..... 3v.
 Syr. sacchar..... 3viiss.

M.—S. 3j every hour.

The vomiting stopped after using five teaspoonfuls, returned the next day, but stopped permanently after using three more teaspoonfuls.—*Der Kinderarzt.*

AT THE WRONG BUSINESS.—Physician: "What is your profession, sir?"

Patient (pompously): "I am a gentleman."

Physician: "Well, you'll have to try something else; it doesn't agree with you."—*Life.*

Medical News and Miscellany.

At the Island of St. Kilda, in the West Hebrides, almost every child born dies of tetanus neonatorum. There is no physician on the island.—*Ex.*

AN analysis of the Keely "bichloride of gold" cure for drunkenness revealed the presence of chloride of ammonium, aloin and Huxham's tincture, but no gold.

THE Twenty-second Annual Session of the Medical Society of Virginia, will be held at Lynchburg on October 6. The Virginia Medical Examining Board meets at the same time and place.

GONORRHOEAL RHEUMATISM IN A YOUNG CHILD.—Dr. Auguste Ollivier reports in *La Médecine Moderne* of June 25, 1891, a case of gonorrhœal rheumatism observed in a girl five years of age.

IN 1883 Zurich voted to do away with compulsory vaccination. The year previous there were three deaths from small-pox, the next year there were eight, the next year there were fifty-two, and the following year there were eighty-five.

WE find on our table the first number of *The Climatologist*, a handsome monthly, edited by Drs. Keating, Packard and Gardiner, and published by W. B. Saunders. This initial number contains several very good articles, some of which relate to climatology.

A BOGUS medical college has been discovered in Tacoma, of which one of the "professors" is said to be a "truck-farmer on a three-acre lot." Diplomas from the Victoria University of Montreal have appeared in Dakota, procured from a Canadian printer, and filled in clumsily by the purchaser.

A PRINCELY GIFT.—The King of Italy recently celebrated a birthday, and did himself no small honor by sending a munificent contribution to the city of Turin, which is just now struggling to raise a fund for the erection of a hospital for contagious diseases. His gift is quoted at 160,000 lire, or about \$32,000.

THE cities of the northwest offer very poor openings for physicians. The death-rate is probably the lowest of any great cities in the world, and there is a distressing absence of zymotic affections; while even the great resource, tuberculosis, is comparatively rare.

THE Marion-Sims Medical College has come into the fold, and after the coming term will exact three courses of lectures and an entrance examination; whereat the *Kansas Medical Journal* gleefully remarks:

"While the lamp holds out to burn,
The vilest sinner may return."

THE amount of iodoform used in the Paris Hospital is something extraordinary, and seems to be "progressing favorably." The authorities contracted for a supply of 48,000 kilogrammes (about 24 tons) at the beginning of the year, but by last month the supply had run out, and the surgeons, like the daughters of the horseleech, were asking for more. It was not, however, until one of them, irritated by the hesitation of the authorities to accede to his demand for a further supply, purchased some at his own expense, that the authorities were shamed into contracting an additional supply, this time at the rate of sixty instead of forty-two francs the kilo.

A LAW FOR THE PREVENTION OF SYPHILIS.—The Massachusetts Legislature has enacted a law which provides that all inmates of charitable or penal institutions who are found to be suffering from syphilis shall be isolated and treated, and, if necessary, detained in the institution until the infectious stage of the disorder is passed.—*Med. Age.*

THE new institute in Berlin for infectious diseases was opened on August 17. Dr. Koch is at the head of this institution, which is divided into a scientific department and a hospital. Dr. Pfeiffer is in charge of the scientific department, while Dr. Krieger conducts the hospital. Drs. Petrusckki, Frosch, Behring and others, act as assistants. The "Mackische schwestern" (nuns) will act as nurses.

AT Manjeri, in Malabar, a disease has declared itself, which possesses novel and peculiar features. The first symptoms are those of ordinary cold with fever. Then a small vesicle, like that of small-pox, appears on the tip of the little finger, and when this breaks deaths ensue. Dr. Beach, a local practitioner, is devoting himself to the study of this peculiar complaint.

A SUICIDE who recently terminated his career in the congenial surroundings of Hampton Court, left a suggestion, in writing, for the coroner's jury, that in order to vary the monotony of a verdict of "suicide while of unsound mind," they might word it "death from inability to cope with the problems of life." The jury, however, declined to be dictated to, and declared the diseased philosopher to have been *non compos*.

A DERMATOLOGICAL CONGRESS.—The German Dermatological Society will hold its second congress at Leipzig, on September 17, 18, and 19. Among the subjects for discussion on the programme are the following: Tuberculin in the Treatment of Tuberculous Affection of the Skin and Mucous Membrane, to be introduced by Prof. Kaposi; and the Pathology and Treatment of Eczema, by Profs. Neisser and Veiel. A large number of communications on other subjects have been promised.

LEPROSY IN JAMAICA.—Dr. Donovan, in his annual report to the Governor, on the Lepers' Home, Jamaica, estimates the leper population of the island at 450, or one leper to 1,380 of the population. Pending general legislation on the question of isolation, he recommends a prohibitive enactment against lepers keeping provision stores or being employed therein, or in the preparation of food; that no leper be allowed to engage in any of the following vocations, namely: baker, butcher, fisherman, tailor, school-teacher, etc.

A MEETING of the Surgeons and Assistant Surgeons of the National Guard of the United States was held in Chicago, Thursday evening, September 17, 1891, at the Leland Hotel. The purpose was the organization of an Association of Military Surgeons of the National Guard of the United States, for the advancement of Military and Accidental Surgery, and all things pertaining to the health, usefulness, and welfare of the civilian soldiers.

The Order of Military Surgeons of New Jersey was organized May 12, 1889. It was first in the field. The meeting was called and an organization effected upon a call made by Surgeon-Major E. L. B. Godfrey, 6th Reg't, N. G. N. J., Camden.

THE Austrian Home Ministry has issued a circular directing that the regulations intended to prevent the importation of cholera into that Empire shall be immediately put into force. An authority on this subject states the pilgrims from Mecca began to reach Europe about the end of last month, and that from now the introduction of cholera is really to be feared.

DR. JOSEPH H. S. JOHNSON, a practicing physician, has entered suit in the Circuit Court to recover \$50,000 damages from the city for personal injuries. Owing to a defective sidewalk the doctor tripped and fell upon the walk, and four of his ribs and his breastbone were broken and he was otherwise injured. The claim is made that he will never again be able to attend properly to his business.

THE Commissioners of the Lancashire Lunatic Asylums state in their annual report just issued, that "although drunkards are not generally regarded as insane, it is a question whether the habitual tippler might not with advantage be considered an irresponsible being, and treated as such." They point to the fact that in not a few cases the only cause that can be detected for a patient's insanity is the intemperance of one or both parents.

MR. JOHN SHEMMONDS, a chemist, of Winton, near Bournemouth, died from the effects of accidentally inhaling the fumes from a bottle of ammonia, which exploded in his hand as he was opening it. One of his eyes was shockingly burned, as well as his mouth and throat, which were penetrated by the concentrated vapor, causing acute congestion of the wind pipe and lungs; and he must have suffered intense agony. Tracheotomy was tried as a last resource, but in vain.

DURING the last quarter the Aberdeen public analyst examined thirty-one samples of aerated beverages, and only ten were found to be pure. One quantity of lemonade contained as much as 4.3 grains per gallon of lead, another 2.25, a third 2.25, and a fourth 1.2 grain, while the others contained .90 to .04 grain per gallon. Two samples contained heavy traces of iron, but this impurity is decidedly less objectionable than the other. No wonder lemonade is sometimes contemptuously described as "liquid stomach-ache."

KIRKLAND MISSION OF CHICAGO.—During the last two years 5,546 patients have been given medical attention without charge. During the time mentioned 8,494 visits have been paid to the dispensary, 1,021 visits have been made by the physicians, and 10,502 prescriptions have been filled.

The Medical Board is as follows: S. W. Cox, M. D.; O. C. Neier, M.D.; J. G. Wolfe, M.D.; C. E. Greenfield, M.D.; and W. C. Leslie, druggist.

The Kirkland Mission was originated about eight years ago. On the first day of October, 1883, Alexander H. Kirkland, who came from Brooklyn, gave a free breakfast to the poor on the Clark street steps of the Custom House Building. Coffee and sandwiches in abundance were served, and later in the day a feast of reason and religion followed the physical repast. That morning the Mayor, Carter Harrison, and Senator J. V. Farwell passed the building together. Mr. Harrison, learning of what was being done, sent to the Rev. Mr. Kirkland a roll of bills containing several hundred dollars. Senator Farwell was so impressed with the enterprise that he leased for it the old Adelphi Theatre building at No. 68 South Canal street, of Chicago.

UNDERTAKER (sympathetically): "What ailed your wife?"

Bereaved husband: "Wall, fust she took a bad cold, then she tuk the doctor's prescription, then she tuk her bed, and a tween the three, they just laid her out."—*Pharmaceutical Era*.

WEEKLY Report of Interments in Philadelphia, from September 5 to September 12, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess, ovarian	1	1		Inanition	1	14	
Apoplexy	6	6		Inflammation brain	5	9	
Asphyxia			1	" bronchi	1	1	
Bright's disease	10	10		" kidneys	6		
Cancer	9	9		" larynx			1
Casualties	12	2		" liver	1		
Cerebro-spinal meningitis ..	1	1		" lungs	6	6	
Congestion of the brain	5	5		" pericardium	1	1	
" lungs	1	1		" peritoneum	3	2	
" liver	1	1		" ear			
Childbirth	1	1		" s. & bowels	4	16	
Cholera infantum	20	20		" tonsils	1	1	
" morbus	1	1		Jaundice			
Cirrhosis of the liver	3	3		Mania-a-potu	1		
Consumption of the lungs	25	5		Marasmus		31	
" bowels	1	1		Measles		1	
" throat	1	1		Obstruction of the bowels ..	1		
Convulsions	12	12		Old age	10		
Croup	1	1		Paralysis	4		
Cyanosis	1	1		Pemphigus		1	
Debility	3	4		Purpura hemorrhagica	1	1	
Diarrhea	2	3		Pyæmia		1	
Diphtheria	9	9		Rheumatism	3		
Disease of the hip	1	1		Rupture of the bowels	1		
" heart	22	4		Septicæmia		1	
" kidneys	1	1		Sore mouth		1	
" liver	1	1		Softening of the brain	2		
Drowned	2	1		Suicide, shooting	1		
Dropsy	2	2		" jumping from win-			
Dropsy of the brain	1	1		" dow	1		
Dysentery	1	1		Syphilis		2	
Erysipelas	1	1		Tabes Mesenterica		2	
Enlargement of the heart	1	1		Trismus nascentium		1	
Fever, scarlet	3	3		Tumor of brain	1		
" typhoid	9	5		" hip	1		
" typhus	1	1		Ulceration of the stomach ..	1		
Gall stone	1	1		Uræmia	2		
Gangrene, lu'gs	1	1		Whooping cough		9	
" foot	1	1					
Hemorrhage from uterus	2	2		Total	179	186	

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending September 12, 1891.

WELLS, HOWARD, Surgeon. Ordered to special duty in fitting out the new Naval Hospital at Portsmouth, N. H.

HALL, JNO. H., Surgeon. Ordered before the Retiring Board, September 19.

ROSS, JNO. W., Surgeon. Ordered, in connection with present duty, member of Board on Labor Employment.

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REACTION OF THE *AMIDE-GROUP* UPON
THE WASTING ANIMAL ECONOMY.

By PROF. SAMUEL G. DIXON, M.D.

IN 1889 I demonstrated that the tubercle bacillus and its nidus, when injected into the animal economy, produced an effect before unobserved.

In former communications I have been quite indefinite in my statements as to the real character of this toxic agent, having only suggested that it might be the residue of the pabulum remaining after the bacilli had selected that which was necessary for their existence, or a digestive secretion of the bacillus; or, again, that it might be an excretion of this living organism. However, in my endeavor to determine the true nature of the active principle of the indefinite mixture that others have entitled "tuberculine," I produced a crystalline substance that at once suggested the amide group: allantoin, glycocin, tyrosin, creatin and creatinin, taurin and cystin, etc. With this fact directly before us, that the wasting economy accompanied by a defective liver and weak excretory organs is often loaded up with waste products, it was believed worth while to institute a line of physio-pathological experiments by injecting the respective members of the amide group into tuberculous animals. Creatin being at hand, I at once injected a small quantity of its solution into tuberculous and healthy small animals, with as satisfactory results as are usually obtained with guinea-pigs and rabbits. However, owing to the fact that these animals do not give entirely satisfactory reactions, W. L. Zuill, M.D., Professor of Veterinary Surgery, in the University of Pennsylvania, kindly offered to assist in carrying out a line of physio-pathological experiments on the larger animals. His clinical experience, particularly with tuberculous cattle, made his services specially valuable in this work. A line of experiments was, therefore, immediately planned, and Prof. Zuill began the experiments to test the physio-pathological action of the respective members of the amide group, when subcutaneously injected into the tuberculous animal economy, as well as into those in health for control experiments. The report of Prof. Zuill on his work up to the present time is as shown in the following communication:

TO PROFESSOR SAMUEL G. DIXON, M.D.:

Dear Doctor.—I hereby submit to you the clinical results obtained from the subcutaneous injection of creatin in tuberculous cattle. The experiments were made in accordance with our pre-arranged plan, and have extended over the last

two months. The results obtained in these experiments more than fulfill my utmost expectations, and are in every respect identical with those which I have obtained with tuberculin. The physiological action of creatin in tuberculous cows is so exact and identical with tuberculin that it is impossible to recognize a clinical difference. Its influence upon circulation and respiration is well marked in animals suffering with milary tuberculosis of the lungs, but large doses of the drug do not react upon these organs should the disease be confined to the other tissues of the body.

The action of creatin upon tuberculous tissues is intensely energetic, causing rapid necrosis of this tissue, giving it the appearance of having undergone a cystic degeneration. The cheesy degeneration of tuberculous tissue seemingly disappears, and its place is taken by necrotic cavities filled with serum, in which float threads and masses of the tuberculous structure more or less large.

August 13.—Experiment No. I was made with $\frac{1}{10}$ of a grain of creatin in a tuberculous cow, with no well-marked reaction.

August 27.—Experiment No. II was made with $\frac{1}{5}$ of a grain of creatin in a tuberculous cow, which caused an elevation of temperature from 101° to $104\frac{1}{2}^{\circ}$ F.

September 9.—Experiment No. III was made with $\frac{1}{2}$ of a grain of creatin in a tuberculous cow, and caused an elevation of temperature from $101\frac{1}{2}^{\circ}$ to $103\frac{3}{4}^{\circ}$ F.

September 21.—Experiment No. IV was made with 1 grain of creatin in a tuberculous cow, and caused a reaction in temperature from $102\frac{1}{2}^{\circ}$ to $105\frac{3}{4}^{\circ}$ F.

September 4.—Check experiment No. II was made with $\frac{1}{5}$ of a grain of creatin in a healthy cow, and no re-action could be observed.

September 9.—Check experiment No. III was made with $\frac{1}{2}$ of a grain of creatin in a healthy cow, and no re-action could be observed.

September 24.—Check experiment No. IV was made with 1 grain of creatin in a healthy cow, and no re-action could be observed.

Respectfully, W. L. ZUILL.

The report is so satisfactory in showing a marked action of one of the amide-groups on wasting animals, when subcutaneously injected, that not only will the chemical work to determine the exact character of the definite crystalline substance obtained from animal tissues and artificially prepared culture mediums be carried on, but also a full line of physio-pathological experiments by the subcutaneous injection of the respective members of the amide-group into the animal economy, in the Bacteriological Laboratory of the Academy of Natural Sciences of Philadelphia, such as its facilities will warrant.

The Times and Register.

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Address.

ORTHOPEDIC SURGERY AS A SPECIALTY.¹

By A. B. JUDSON, M.D.,
NEW YORK.

A FLOURISHING medical society sometimes divides into sections. It is an involuntary process, or, at least, one to which the members are forced by the necessity of thoroughly accomplishing the objects of the society. The process may be called an analysis. In the present instance, however, if I understand the organization of the Congress of American Physicians and Surgeons, we have a synthesis. A number of societies voluntarily combine to secure ends which were not contemplated at the beginning of each. A division of labor having been made, according to which each society has its special work to do, it is proper and useful for the societies to meet together for co-operation. Let us therefore briefly consider some of the salient features which mark our specialty of orthopedic surgery. A better knowledge of ourselves will put us in more quick relation with other workers, both general and special, and enable us better to do our honorable part in the grand plan.

In common with other specialists, we occasionally hear that we are limited in the possible range of our achievements. The limitation is, however, entirely voluntary, and the work within these limits is practically inexhaustible. If we were not so busy, we might perchance be troubled because we are not always and exactly understood. The sign before an orthopedic hospital in New York is supposed by some of the passers-by to indicate a homœopathic

institution. I am probably not alone in having been asked to perform the minor surgical operations of the chiropodist. Many, even among the learned, suppose that the latter part of our name is derived from the Latin word for *foot*, instead of from the Greek for *child*. We are also confounded in the minds of some with the instrument makers. I mention these things in passing, without a serious thought. If they exist, like morning mist they will pass away.

It is well, however, to recognize the fact that our practice is comparatively lacking in popular qualities. We have no critical, capital, or brilliant operations. What of brilliancy is there in keeping a limb in such an attitude that the weight of the body in locomotion shall be a favorable instead of an unfavorable agent, until the natural growth of the member results in comparative symmetry; or in controlling the environment of the diseased joint and the patient, so that the natural processes of recovery and repair shall have their triumph, while the limb is daily growing in symmetry and ability with the growing child? This is not bold surgery, but there is great pleasure in watching and reverently assisting these constantly-recurring natural miracles. And will any of us forget the delightful friendships made among our little patients; their pretty bashfulness; their ready confidence; their irrepressible cheerfulness; their graceful acceptance of what is, alas, inevitable? The combination in them of childish and heroic qualities is a daily wonder. To watch them at play is like a dream in which the birds and wild flowers are enacting a tragedy and improving the precepts of Stoic philosophy.

Our practice is not only lacking in brilliant achievements, but it is also uninviting, because, as a rule, our patients do not make absolute recoveries. There is always, or nearly always, a residuum of disability and deformity, and in this is to be found perhaps

¹ The President's address, delivered before the American Orthopedic Association, at Washington, D. C., September 22, 1891.

one reason why our specialty has existence; for what general practitioner would lightly assume the care of a case so exceptional in his practice and so momentous as those which fall into our specialty?

The why and the wherefore of specialties in general, and ours in particular, are questions of interest. Some will say that we have a natural aptitude for mechanics, an inherited preference for slow and sure methods, compared with those that are quick and uncertain, or an inborn reverence for what is physically demonstrable. These personal characteristics may explain why some of us are orthopedists; but I believe the reason why our specialty exists and thrives is to be found in the desire of the public, the final arbiter, that experts should be invited to bear the responsibility of orthopedic cases.

One very attractive feature of orthopedic practice is its *reality*—for want of a better word. It is especially the domain of physical demonstration, where the acceptance of pathological doctrine, as well as therapeutic precept, must be preceded by absolute proof. Here subjective symptoms are forgotten in the presence of objective signs. The data for diagnosis are visible, palpable, and mensurable. Treatment is by forces whose action is nicely directed, increased, diminished, and accurately measured. The very weight of the body is duly considered in trauma and therapeutics, and finally the results of treatment are recorded in degrees of a circle and fractions of an inch. Dealing thus, as we do, with physical realities, it is well for us to keep our eyes open to the moral verities also, which no less form part of the tissue of our daily professional work. Let us remember that diligence is the price of success, and that the only desirable success is that which is reached by the rejection of error and the loyal recognition of truth.

Since our last meeting there has occurred the death of one of our corresponding members, whose hostility to error might in all friendly criticism be called intemperate; one whose diligence and devotion to the interests of his patients made him an exemplar worthy of our affectionate remembrance. But I will not trespass on the subject of the first paper of our session, which is by Dr. A. J. Steele, of St. Louis, on The Orthopedic Work of the late Mr. Thomas, of Liverpool.

Original Article.

AN OPHTHALMOSCOPE FOR GENERAL USE.¹

By EDWARD JACKSON, M. D.

IT would be a great gain to both doctors and patients if a much larger proportion of those who class themselves as general practitioners were able, when the need for it arose, to use the ophthalmoscope. One who has no practical experience with it cannot even properly appreciate what he reads or hears of ophthalmoscopic appearances. And there are in the aggregate many cases in which the progress of general disease could be far more intelligently followed by its routine use, without entering upon debatable ground or attempting to use symptoms of doubtful significance.

With the ophthalmoscope, as with other instruments, the cheap instrument is very apt to lack certain important features, and the costly instrument is mainly confined to the possession of those who mean to use it a good deal. It took many years to adapt

the microscope to the needs of clinical work, to rid it of mechanical stages and other mechanical nuisances, and perfect its really essential parts. And the ophthalmoscope must pass through a similar pruning and adaptation before its use can be truly popular and common in the profession. For some years I have been working at this problem, and herewith present my results.

The ophthalmoscope for general use must be:

1. One in which the difficulties of using the instrument are as far as possible overcome.
2. It must be one that will be as satisfactory as any of the best instruments for any case that is likely to be encountered.
3. It must be cheap.

For this one I have no hesitation in claiming that with it the fundus of the eye can be seen as readily as with any ophthalmoscope heretofore made; for all practical purposes as a refraction ophthalmoscope, its lens series is complete; it can be bought for \$8.

It is easy to see through, because the mirror, which is circular, 30 mm. in diameter, tilts each way to the best angle, at about 25° or 30°; it has a shorter canal, and wider lenses than have most first-class refraction ophthalmoscopes; each lens is retained in exact position by a spring stop; and all the lenses or combinations of lenses are available without taking the instrument from the eye.

The lens series is furnished by combinations of six lenses in two slides, and consists of convex 1, 2, 3, 4, 6, and 12 dioptres; concave 1, 2, 4, 6, 10, and 22 dioptres. To appreciate this series one must bear in mind the degrees of ametropia that are commonly encountered in practice. Among 4,000 eyes, the statistics of which I have published in the *Transactions of the American Ophthalmological Society* for 1889, only one eye had hyperopia of 13 dioptres, and only one eye had myopia of 23 dioptres.

The series does not contain half dioptres, which are given in all the larger refraction ophthalmoscopes; but a very prominent ophthalmologist has recently said that he had the half-dioptre lenses taken out of his large instrument (Noyes' modification of Loring's) as comparatively worthless. Under especially favorable conditions there are a few ophthalmoscopists who have constant and extensive practise with the instrument, who can, I believe, measure refraction with a little more exactness with half-dioptre lenses than they could with only whole-dioptre intervals. But the ophthalmoscopists who can do this are comparatively few, the cases in which they can do it are few, and the practical value of doing it is utterly insignificant. For those who are not in special practice half-dioptre intervals are always a delusion and snare, a hindrance, a cause of inaccuracy. They are, therefore, discarded.

Although the statistics above referred to show that in but one eye in forty of those encountered in practice is the degree of ametropia over 6 dioptres, to one not very familiar with the properties of lenses, the intervals between the stronger lenses of this series may seem too great. Such must be reminded that the effect of every intermediate lens' strength may be obtained by slightly varying the distance of the lens and instrument from the patient's eye. Thus the convex 6-dioptre lens acts as such only when placed against the eye; by drawing it back less than three inches it is made to act as a 12-dioptre lens, and within that space will correct any intermediate amount of hyperopia. By withdrawing the 12-dioptre convex lens a little over one inch it takes the place of a 20-dioptre lens. On the other hand, by

¹Read at the Philadelphia County Medical Society.

withdrawing the concave 22-dioptre lens a little over two inches its effect is diminished to 10 dioptres, and in that space every intermediate strength is reproduced. In the same way the withdrawal of the 10-dioptre concave lens to the same distance gives us the 6 dioptre effect.

When this is remembered it is readily seen that any measurement of refraction by strong lenses is utterly untrustworthy, unless the distance of the lens from the eye is taken into account; and if it is taken into account, any additional intermediate lenses are quite unnecessary. The above series is sufficient for the direct method in all cases except the very highest myopia, for which the expert ophthalmoscopist is apt to resort to the indirect method as more satisfactory.

To one accustomed to using a disc ophthalmoscope the arrangement of lenses as here in slides will at first seem awkward and confusing, but to one who begins with this instrument, or who has already used an instrument in which the lenses are so placed, it is especially convenient. The convex lenses are all in the back slide, the concaves in the front. One can be used alone, or both slides can be moved at once by the tip of the same forefinger, according to the lens required.

In the focus of the mirror, the size of the sight hole, the blacking of it, the proportioning of the instrument, and its mechanical execution, it is to equal the best ophthalmoscopes now used. It is made by Mr. D. V. Brown, of Philadelphia.

Since this is not my first attempt at the modification of the ophthalmoscope, and another instrument has my name associated with it, perhaps it will prevent confusion if I exercise the right of naming this. And with the idea of giving it a name that shall by a single word indicate the idea of its design for general use, I shall call it the "Polyclinic Ophthalmoscope."

Clinical Lecture.

HEMIATROPHIA FACIALIS PROGRESSIVA.

By PROF. NOTHNAGEL,
VIENNA.

(Translated by Herman Marcus, M.D.)

THE patient—female, twenty-two years old—complains of violent, intermittent pains in the left half of the face, which pains first made their appearance in 1888, following right after a psychic affection. These pains soon disappeared. After a year they returned for a short time, but since some months they have again returned with greater intensity than before. Her sister would tell her that the left side of her face looked different than the right; that it looked more emaciated, and that the skin on that side was wrinkled.

If we look now at the patient we notice at once the difference in the two halves of the face. The left is very much emaciated, fallen in; the skin shows wrinkles. If I now cover the right side of the face you will notice that the patient presents the appearance of a woman sixty to seventy years old; but if I cover the left side you see before you an appearance which corresponds with the age of the patient.

I think that this showed you then the marked contrast in the two sides to perfection, and the impression you gained will facilitate you in the diagnosis. The left temple shows emaciation resembling a skeleton; the fossa canina is very much hollowed out; the mouth is drawn to the left side; the left naris is

somewhat smaller than the right; the left eyeball lies deeper in the orbit, and feels decidedly harder than the right; the left part of the chin has lost in size; the curve of the right side of the lower jaw is larger than on the left, and we can easily feel the edge of the bone; the lips appear like cut off in the median line, being so much emaciated and wrinkled on the left side; the color of the forehead and cheek is paler on the left than on the right side; the left ear is smaller than the right; the color of the hair is on both sides the same. I beg to impress upon you this fact, because we will often find a difference in the color of the hair on the affected side, it being often one of the first symptoms of atrophica facialis. The temperature is the same on both cheeks at present; the temperature in the left meatus auditorius externus is 35.8° C. (96.2° F.), to 36.0° C. (96.4° F.) in the right. On the left side of the mouth (the corner especially) we notice the blood-vessels through the skin, which is not the case on the right side.

Now, all this shows us an atrophy of the left side of the face, without any real vaso-motor symptoms; without any noticeable difference in the temperature of the cheeks—a condition which we designate as hemiatrophica facialis. If we test the muscles of the affected side as to their mobility we find no change, and see that their normal functions are preserved. We further see that the patient is able to whistle; to close her eyelids; to draw the mouth to either side; in fact, we can see by all these experiments that no paralysis is present.

If I press on the supra-orbital foramen the patient complains of only slight pains, which become greater if I press on the infra-orbital foramen, and intense if I exert the pressure on the foramen mandibulare.

Valleix has, some fifty years ago, described certain points—*puncta dolorosa*—in neuralgia, which are called Valleix's points. These are points which become painful in neuralgia if pressure is brought upon them. I do not wish to go into detail as to these points, but will say that our patient shows them to perfection. I must also remark that the closing of the lids on the left side is more painful than on the right, which tends to prove that there also exists a hyperalgesia of the muscles of the affected side. Cold is felt more extensively on the right side.

We also find on further examination an atrophy of the left half of the tongue, which is dryer, smaller, more uneven, and rougher than the right side. The left half of the palate is also atrophied; the left arcus glosso-palatinus is higher, thinner, and softer; the left tonsil is higher, and even the left half of the uvula is atrophied. You will also notice that if the patient closes her teeth the left masseter and temporal muscles are weaker and smaller than the right. Examination of the sensory organs shows no change.

The electric contractility of the affected muscles is normal on faradization or galvanization. Now this is the result of our examination, and to explain this condition must be our next step.

I have already mentioned to you that we have to deal here with a condition which we call hemiatrophica facialis progressiva. This case shows marked symptoms, for reasons which I shall state to you later on, a case which you will find both interesting and instructive. Such cases as this are very rare, and I have only seen three to four similar ones.

To state in as few words as possible the true condition of this disease, I will say that we have to deal here with an affection which slowly but progressively has a tendency to a continuous wasting of one-half of

the face, and, as experience teaches, generally the left half; still, it would be well not to lay special stress on the situation of the lesion. We will also find this disease more frequently in women than in men, and especially between twenty and thirty years.

The first change noticeable is a change in color on one side of the face. We may only notice a white or pigmented spot, or a change in the hair of the affected side, at first. Then a gradual emaciation may be noticeable. At first the deep fascia, then the muscles, and finally even the bones become atrophied. Only the fat can disappear entirely, while the muscles and bones can only atrophy and emaciate.

Besides all the symptoms I named connected with this disease, we may find some which will give each case its peculiar stamp, we may thus find a change in the pupils, a contraction or dilation of the pupil on the affected side. We may also observe a change in the circulation of the blood, either a peculiar pallor or a hyperæmia of the diseased part. In other cases again there may be a difference in the perspiration. Experiments with injections of pylocarpine have proven that the affected side does not perspire at all, or less than the healthy. All these symptoms may be present in connection with this disease, and will be of advantage to you in correctly making your diagnosis.

The mobility of the muscles is generally unchanged, and only when special complications occur, the motor power may be lessened, but in a true and simple case of hemiatrophia facialis no such motoric changes will occur.

The degree of atrophy differs. Our case here is peculiar by its intensity. We not only find the superficial and deep face, the frontal and masticating muscles affected, but also those of the tongue and the soft palate on the left side—still, there may be also an atrophy of the muscles of the throat, and then we will see an affection like progressive bulbar paralysis.

Besides all these symptoms we may find signs of an affection of the trigeminus nerve—pains. Such a case of characteristic trigeminus-neuralgia as we have before us is very rare, and the medical literature only quotes a few. On this symptom, gentlemen, I beg to lay special stress, as this proves to be the most interesting of all symptoms. I have already told you that we have here a typical trigeminus neuralgia, which is confined to certain points: Intermittent pains, Valleix's points on pressure, all points which help to make this case peculiar.

The question now before us is, How to explain the connection between the neuralgia and the atrophy. If we look upon this state superficially we might find it self-explainable in a trifacial neuralgia, which then caused an emaciation of the face, a condition which, as you know, is of common occurrence. But this is not the case, and on closer study we will find that the conditions are not as simple to be explained as we may suspect. This point brings me now upon the discussion of the different theories which have been established in the course of time. Landouzy has called this condition an *aplastic laminense*, claiming to be a disappearance of the subcutaneous fatty tissue. This theory is not very feasible, knowing, as we do, that besides the fat the muscles and bone may atrophy. With our knowledge of to-day we must accept it as an undoubted fact that different circumstances partake in the formation of this condition. We much look upon this lesion as that of a trophic nature. You will all agree that we have to deal here with a primary atrophy, and the question is the origin of this disease.

Your physiology has taught you that there is quite a war as to the existence of secretory, trophic and vaso-motor nerves; a war which has not yet been concluded. The presence of vaso-motor nerves in the system is an established fact, less certain is the existence of trophic nerves. Physiologists recognize special secretory nerves, and these nerves which mediate secretion have been established as a positive fact by Pflueger, one of the most thorough and prominent physiologists. Haidenheim has studied this discovery of Pflueger, and claims special secretory nerves for the different glandular organs. Thus has Haidenheim found by experiments secretory nerves for the stomach, kidneys, salivary glands, and for most secreting organs.

Though the existence of special nerves governing the secretion is well established, there is a group of nerves which are the cause of the difference of opinion which I mentioned before, and which separate the physiologists on this question. I speak here of the trophic nerves. Pathology must accept the existence of these nerves, as there is a number of incidents which could not be explained otherwise; this is to say, influences, which coming from certain nerve centers, aim to the nutrition of the tissues. If these influences are disturbed in any direction, if the activity of these nerves is hindered, then the nutrition of the tissues will suffer changes which may finally end in their mortification. Such trophic centers we find in the great ganglionic cells in the anterior horns of the gray substance of the spinal cord, and the lesion due to a disease of these ganglionic cells is known to you as *polio-myelitis atrophica anterior progressiva chronica* or *acuta*. Then again we know a number of cases in which the disturbances of the nerves must be explained by trophic disturbances. All these facts force us then to the acceptance of the theory that these disturbances are caused through disease of these trophic nerves.

Some twenty years ago I had written of the relation of trophic disturbances to neuralgia, and then I held the opinion that we may observe atrophy in all long-continued ischias. At that time I adhered to the old physiological theories, and connected this complicated lesion with vaso-motor disturbances. Since then I have rejected this theory, because I have seen patients suffering with ischias in whom no vaso-motor disturbances could be found, and still showed emaciation of the affected extremity. Landouzy has asserted that these atrophies, which accompany such neuralgic processes, are due to neuritic lesions. You can always accept a positive neuritis in cases in which neuralgia is combined with a typical atrophy.

You may now say that just as well as it is possible for a neuralgia connected with an atrophy to occur in ischias, we may consider this hemiatrophia facialis as a neuralgia accompanied by atrophy. In this patient, gentlemen, I consider it to be the case, but you would make a mistake should you generalize this case and conclude that each hemiatrophia facialis is caused by neuralgia, as you will find mostly cases of hemiatrophia facialis in which no neuralgic pains can be found, and we cannot speak of neuralgia where no pains exist. And if, in the course of this disease, neuralgia develops, then you will notice the slowness of its development, and it will never reach the intensity of a true typical neuralgia.

If we sum up all this, we will find that we will have to differentiate a number of pathogenetic forms of hemiatrophia facialis; firstly, such of simple atrophy without any other symptoms. These cases may again be subdivided into two groups, such in which will

appear, as I may say, vaso-sympathetic symptoms, where differences in the pupils, in the circulation, etc., etc., may be observed. It may be right in these cases to connect such atrophy with a lesion in the region of the sympathetic nerves; a lesion of the superior ganglions of the neck, because we know that the fibers of the sympathetic nerve, which supply to the face, go through the superior ganglion of the neck, partly, also, through the second ganglion. I have succeeded in proving to my satisfaction that all vaso-motor fibers supplying the face pass through the superior ganglion of the neck by tearing out the ganglion of the sympathetic nerve, and then tried to excite the vaso-motor nerves of the face. Some of these experiments succeeded, as the nerves in question were entirely paralyzed. Differently is the action on the cephalic vessels. Their nerves pass partly through the sympathetic, partly they come direct from the brain without touching the ganglion of the neck.

Another group of cases of hemiatrophia facialis which are not complicated with pains show no vaso-motor symptoms.

The well-known Berlin case of hemiatrophia facialis which has been observed and demonstrated for many years, and which, later on, has been examined microscopically by Prof. Mendel, remained free of all vaso-motor symptoms. Prof. Mendel made a diagnosis, which is of the greatest importance in the question of the connection between neuralgia and atrophy. He found in above case a *neuritis interstitialis proliferans nervi trigemini* with degeneration of the roots of this nerve in the brain. With this diagnosis, all doubts as to the possibility of the connection of trophic disturbances to inflammation of the trigeminus and the possibility of facial atrophy being a lesion of the trigeminus has been lifted. In that case a tumor pressing on the fifth pair of nerves caused complete anæsthesia with atrophy of the same side of the face.

The case before us I believe to belong to a different group. It belongs apparently to such cases of ischias which are connected with ischias. We find here the cause in a neuritis, and whether this neuritis comes directly from the center or from the periphery, I am not in position to assert. We can only call this a typical case of trigeminus-neuralgia connected with a marked atrophy. As I said before, this is a very rare case; you may and will observe dozens of trigeminus neuralgia, long-continued chronic neuralgia without any signs of atrophy. The interest of this case lies in this very fact, it being a neuralgia with typical and intense atrophy.

Regarding the treatment of such a condition you may well understand that, just as it must be in accordance with the causation of each individual case.

If we have an atrophy due to a pressure on the trigeminus, then surgical interference is imperative. If a tumor lies on the fifth pair, then we will not delay to remove it. In cases where besides an atrophy pains exist, and where we may accept the condition as a peripheral interstitial neuritis, perhaps a neuritis extending to the brain, then we would try to combat the evil with external treatment.

In the treatment of our case here, we must pay attention to the pains and the trophic disturbances. The prognosis for the pains is somewhat favorable. You heard the patient say that these pains stop at times, and we may positively expect a favorable result if using galvanic or faradic batteries; which of the two currents will be of greater benefit time will tell, as it depends on the individuality of the patient.

As regards the atrophy our prognosis must be different. We know from a number of such cases that reformation of atrophied tissues is impossible; in most cases the atrophy continues gradually; hence, the name *hemiatrophia progressiva*. The fatty tissues under the skin disappear entirely, the muscles and bones emaciate and, despite all treatment, the atrophy cannot be combatted, and a regeneration of the tissues is impossible. This is the general course of such cases in which an atrophy without accompanying neuralgia exists. All this will show you the great doubtfulness of the prognosis in our case. No matter what treatment we may try, this patient will keep the atrophic condition all her life. Still I might limit my assertion, as there may be a slight improvement in her condition. We know of a few light attacks in which reformation of the atrophied tissues occurred, but these are so few exceptions to the great rule that taken it all together our prognosis must be, *quoad sanationem* (as regards to cure) unfavorable, while *quoad vitam* (as to life) favorable. Such patients may live in this condition for years without any special injury to their general health until some intercurrent disease appears, such as pneumonia, for example, caused through bad swallowing; a complication which may develop in the course of time, and thus end their lives.

Regarding the treatment of the pains I do not desire to go into details; I will only say that internal remedies are of little or no account, and that we must take recourse sooner or later to surgical interference. Such an operation is in most cases of the greatest satisfaction and benefit to the patient.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

THE time of confinement to the house after delivery varies with different women. Those who go out and resume their work early, age prematurely; whereas, a woman who is well taken care of after confinement, is rather made younger by it; her appearance improves.—*Woodbury*.

One of the best signs of lung consolidation, however slight, is prolonged expiration with a slight raise in pitch.—*Anders*.

Rheumatic endocarditis, in early life, is more apt to damage the large thin valves like the mitral or tricuspid, than the thick and strong valves at the base of the aorta and pulmonary artery. In advanced life, the aortic valves become the seat of calcareous change, so that after middle life we are more apt to meet with murmurs at the aortic orifice.—*Woodbury*.

TREATMENT OF TUBERCULOSIS.

We gave creasote for its effect on tubercular infiltration, and syrup of the hypophosphites and arsenic in small doses, after meals, for the purpose of building up the lung tissues. In small doses arsenic builds up tissues, but in large doses it destroys them. Syrup of the hypophosphites strengthens the patient. The creasote is the best antiseptic treatment in case of phthisis; we cannot say it is curative, but it does limit the extension of the disease.—*Anders*.

Where the heart muscle is weak, be the valvular lesion ever so well marked, you get very little murmur; sometimes none. On the other hand, where you have a strong cardiac muscle, a very slight lesion may give a decided murmur.—*Anders*.

HEART LESIONS.

Treatment may be summed up in a few words, especially up to the point where the heart muscle begins to give way. So long as you have, with the primary lesion, a compensating lesion on the other side, you simply give proper instructions as to rest and diet. Tell the patient never to hurry or to work very hard. Do not give much fatty food, neither should sweets or sweet vegetables be given; but give such nitrogenous food as is easily digestible. Warm salt water baths are good. As soon as the cardiac muscle becomes weak, and there is pain and sickening sensation about the heart, then you must begin to tone up the heart muscle with medicine. The best way to accomplish this is by small doses of digitalis with iron. Iron sometimes disagrees with the stomach; if so, instead of iron give arsenic, which always agrees with the stomach. Give arsenious acid gr. $\frac{1}{20}$ with extract of digitalis gr. $\frac{1}{8}$, after meals.

—Anders.

The blood in a rheumatic patient is not *acid*. If that were so, the patient would die. It is simply *less alkaline*, due probably, to excess of lactic acid.

—Woodbury.

IVY POISONING.

For a girl seventeen years old, who had been affected with poisoning, supposed to be due to ivy, the fluid extract of jaborandi was given, in doses of 10 drops every hour, in warm water. Free perspiration ensued, with great relief of the local symptoms, and in a few days the patient was well.—*Waugh*.

There are few cases in which the quality of the attending physician is of more importance than in those of lesions of the cardiac valves. It is not easy to formulate treatment, or to lay down rules of hygiene that are generally applicable. The patient should live by rule; reporting to his physician at regular intervals, and guard against all sources of cardiac weakness or undue stimulation, if he desires to "live long in the land."—*Waugh*.

COOPER HOSPITAL (N. J.) NOTES.

PYOSALPINX.

WHEN either of the Fallopian tubes becomes involved from an extension of an inflammation from the cavity of the uterus into the tube, the lining membrane of the tube becomes congested, inflamed and thickened, and pours out an increased secretion, generally a muco-purulent secretion, that irregularly dilates the tube and thins its muscular structure. The longitudinal folds in the mucous lining of the tube become effaced; the shepherd's crook shape of the tube changed; the surrounding peritoneal structure infiltrated; peritoneal adhesions form, and the peristaltic action of the tube arrested, or in part destroyed. If the inflammation results in gluing up the fimbriated extremity of the tube by adhesive peritonitis, or obstructs the uterine end by swelling and thickening the mucous membrane of the tube, or by endometritic adhesions, the tube becomes changed from a duct, connecting the uterus and abdominal cavity to a closed sac. When both ends of the tube become occluded, and the retained secretion becomes purulent, the condition is known as pyosalpinx.

In the normal state, neither of the tubes are palpable in a vaginal examination; but when either tube is dilated from retained secretion, or from blood, it may be felt through the lateral fornix of the uterus, on the side in which the tube lies.

In the early stages, salpingitis, or inflammation of the tube, is difficult to recognize when associated with acute endometritis, except by increased severity of the symptoms when the tube becomes involved. Then rest, anodynes, and close attention to the secretions are indicated. But when either of the tubes have been converted into a shut sac, and contain pus, only laparo-salpingotomy will prove effective.—*Godfrey*.

To accelerate desquamation in scarlet fever, and shorten the infective period, Jamieson recommends that disinfectant inunctions be employed during the whole course of the attack. He formerly considered a 3 per cent. ointment, or oil of carbolic acid the most reliable agent. With this there should be daily ablutions with soap and water. But a better agent has appeared in Eichhoff's resorcin soap. The action of resorcin in causing the outer layer of epidermis to separate without injury to the deeper ones is well known. A 3 per cent. resorcin salicylic superfatted soap is now prepared, by rendering the soap acid with salicylic acid, and then adding the resorcin. By the use of this agent the period of the attack to the end of desquamation was reduced from fifty-five and a half days to forty and one-quarter days.

—*Lancet*.

POISONING BY ARSENICAL COLORS.—It is asserted in a recent number of the *British Bee Journal* that Mr. Clement, a bee keeper, of Warburton, Sussex, died recently from the effects of arsenical poisoning due to the use of a bright crimson drugget containing arsenic, which had been put down in his house some two years ago. Nothing could be said against the sanitary condition of the premises, and after the drugget had been for some time in the house, illness occurred among the inmates, who, however, recovered when absent from home. It seems to have been assumed that the poisonous effects were due to the presence of an aniline dye containing the small proportion of arsenic which may have been left as an impurity after the production of the dye. It is not generally known that cases of arsenical poisoning due to the use of materials dyed with aniline dyes are not so much caused by the fact that arsenic had been used in producing the dye—a process by no means necessary, although still employed by some manufacturers, as, for example, in the method of producing rose aniline by the use of arsenic acid as an oxidizing agent—as by the fact that arsenical compounds are largely used as mordants to fix the dye upon the material. It is obvious that this proceeding may cause the presence of a much larger quantity of arsenic in any given portion of material than would result from the presence of arsenic as an impurity in the dye used. A case in point has been recently described by a London public analyst. A lady had purchased from a well-known West-end establishment several yards of a light flimsy printed material of the kind now so much employed for curtains and other household decoration. While working at this material both the lady and her maid began to suffer from symptoms of arsenical poisoning. The substance was found by the analyst to contain very large quantities of arsenic, a compound of which had obviously been used for the purpose of fixing the colored printed pattern. Legislation whereby the vendors of materials of this kind could be dealt with in the same way as persons who sell adulterated goods is urgently needed. At present there exists absolutely no restriction upon such sales, and enormous amounts of poisonous material may be distributed with impunity.

—*Brit. Med. Jour.*

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EXHAUSTED VITALITY.

THERE is something suggestive in the following history; one that is unhappily only too frequently unfolded to the physician: A merchant, or banker, has for the last ten years devoted himself to his business; working on the high-pressure system, unremittingly. With full confidence in his physical forces, he calls upon them for an excessive amount of work. He does literally two or three men's work each day. In the course of time, he experiences a curious change. He ceases to display the feverish energy of his early years, grows sluggish; finds himself unable to drive himself to do even the ordinary man's daily task. He goes to his office and gets into position for work, but there he stops; toying idly with his pen; absolutely unable to accomplish a simple exercise in book-keeping, perhaps. He "takes things easy" for a few weeks, but there is only the most transitory improvement. It is not old age; it is not simply mental fatigue; it is vital exhaustion; and in nine cases out of ten there is a woman at the bottom of the trouble.

During the years of hard work the vital forces are kept on a continual strain, and the sexual functions are gradually weakened, without anything occurring to arouse the suspicions of the individual. Then, just about the time when business begins to become a little monotonous, the man falls into the hands of some syren with powerful sexual proclivities. Nothing is quite so distasteful to a man as a hint of his weakness sexually; and the first indications of this are certain to be met by a resort to sexual stimulants; and the more rapid exhaustion of vitality.

The danger of dementia is great, but it is not inevitable. If the physician possesses the necessary acumen to detect the cause of the decay, and can lay the case before the patient in a way to convince him, there is good reason to hope for a cure. But instead of consulting his physician, the unfortunate man is more likely to fall into the hands of wretches of the Mormon Elder Damiana Wafer stripe. Who can tell

how many men have been ruined, body and soul, by that nostrum! How many minds have sunk in dementia, with the assistance of the aphrodisiacs so boldly advertised in the secular press; minds that could have been saved, had the victims resorted to a wise physician instead of to a pandering quack. If people could only appreciate the enormity of the evil done by these quacks, there would be less denunciation of physicians for not recognizing them.

TREATMENT OF GONORRHOEA.

IN the *Northwestern Lancet*, Van der Horck contributes an article upon the treatment of gonorrhoea in the male. The paper is noteworthy for the excellent and minute directions given; evidently based on clinical work rather than on reading. The local use of hot water is highly praised for the first stage, when no medicine or injection is used, reliance being placed upon hygienic measures. When the severe symptoms have abated, sandal-wood oil is given in preference to copaiba. For local use he recommends the following formulas:

1. R.—Zinci sulphatis,
Acidi carbol.,
Alumenis crud.....āā 1.0-3.0.
Aquæ destil..... 300.0.—M.
2. R.—Potassii permanganas..... 1-2,000.
I-200.
3. R.—Argenti nitras..... 1-4,000.
I-500.

"When the symptoms are very acute, *i. e.*, profuse discharge, severely painful micturition, swelling of mucous-membrane at the meatus, etc., injections, no matter how mild, are irritating, and mostly tend to increase the severity of the disease and to spread the inflammation to the deeper portions. Another condition which prohibits the use of anterior injections is the complication of the posterior portion of the urethra.

"As a rule, we should wait until the subjective symptoms have considerably abated, which is usually about the end of the second or third week.

"The zinc sulphate, carbolic acid and alumen, 1 to 2 parts to 300 of water, will prove the most beneficial, and should be injected three times a day for a week. This, as a rule, will greatly diminish the discharge, and should for the second week be strengthened to 2 to 3 parts to 300 of water, and continued for a week or two.

"If this does not entirely dry up the discharge, the permanganate of potash solution, as a rule, in strength of 1 to 1,000 (or one half a grain to the ounce) can be used, and gradually increased in strength to 1-500, or a grain to the ounce of water. Or we may use the nitrate of silver in strength of from 1-3,000 to 1-1,000, and even stronger, according to circumstances.

"The mode of making these injections is as follows: The patient must urinate thoroughly just previous to injecting. Then using a Bumstead, hard rubber, penis syringe, he slowly injects the fluid until he feels a marked resistance, when the syringe is removed and the fluid allowed to run out. This pro-

cedure is immediately followed by a second injection the same as before, only that the fluid should be retained in the urethra for about a minute. The patient should not urinate thereafter for several hours. Care must be taken with solutions of nitrate of silver and permanganate of potash, as they stain the clothing and hands. The strength of the injection must be suited to the case. Always begin with mild injections."

The most objectionable part of the paper is that in which instructions are given for the avoidance of gonorrhœa in illicit intercourse. This appears to us altogether outside of the physician's duty. Instructing people how to sin with impunity is a degradation of our noble profession.

Annotations.

PROF. WILLIAM PEPPER has been subpoenaed as a witness in a land-title case in West Virginia. It is a curious instance of the working of the law, when such a man must leave the University, and the eighty-seven departments, branches and other organizations of which he is the head mucky-mucky, and go off into the wilderness for fifty cents a day and no mileage. Meanwhile, during his absence, Philadelphia will wobble about helplessly, like a decerebrated chicken.

THE USE OF FRUIT.

WHILE fruit gives but little toward the nutrition of the body, it contributes materially toward keeping it in health. Bender found that fruit gives off a great deal of carbonic acid, while on the tree and when stored in the house; so that it is not well for persons to sleep in a room where fruit is kept in large quantity. Uffelmann praises the fruit diet in chronic indigestion, gastric catarrh, especially after alcoholic excess, hemorrhoids, cerebral fluxion, scurvy, and hepatic affections. Calculus is almost unknown in cider districts. The exclusive diet of grapes was highly commended by Niemeyer in plethoric conditions generally and in obesity.

LIGHT IN A DARK CORNER.

A TEMPERANCE movement has been set on foot among the Ruthenians, a Slavonic people inhabiting Galicia and the Bukowina. Like all subject Slavic races, the Ruthenians are addicted to alcohol to excess. It has been found necessary to urge total abstinence on these people, as between this and drunkenness there is with them no neutral territory. Much of the success of the movement is due to a peasant, who, in a fit of drunken frenzy, killed his best friend. In these provinces drunkenness can be plead in extenuation of crime, and the man was only confined for a year and a half. Since his release he has devoted himself to the temperance work among his people.

THE HUMAN MOUTH.

MILLER, the Berlin savant who started the report that kissing is a dangerous pastime, fortifies his statement by a paper, in the *Journal of Laryngology*, upon the human mouth as a focus of infection. He enumerates as diseases traced to the oral bacteria,

dental caries and its consequences, pneumonic fever, tonsillitis, angina ludovici, pneumococcus abscesses, actinomycosis, noma, thrush, and other oral affections; diphtheria, tuberculosis, syphilis, and the human form of stomatitis epidemica, or foot-and-mouth disease. He gives a list of oral bacteria that have been cultivated, numbering twenty-two varieties; besides numerous other pathogenic micro-organisms that have been found in the mouth, but have not been as yet cultivated in artificial media.

COMMON ERRORS AND FALLACIES IN THE TREATMENT OF CHILDREN.

UNDER this head Cheadle (*Practitioner*) enumerates the following:

1. The sudden weaning of infants on to fresh cow's milk and water.

2. The feeding of children on a diet that is excessive or deficient, either in gross quantity, or in certain essential ingredients.

(a.) In sufficient gross amount of nutritive material.

(b.) Food deficient in fat: including most of the so called artificial foods.

(c.) Food deficient in proteid.

(d.) Absence of antiscorbutic element in the diet. All farinaceous and dry artificial foods are deficient in this respect; even those containing milk or egg.

(e.) Prolonged use of artificially-digested foods.

In the treatment of infantile diarrhœa, he objects to the notion that this is salutary, even during teething.

"As a rule astringents are given and opium carefully avoided, as being dangerous in the case of little children. In my experience astringents such as hematoxylon or catechu are useless in the acute stage, and opium in some form essential in anything like a severe case. Grey powder with Dover's powder in small and frequently repeated doses should be given if there is much vomiting. Bismuth, the insoluble nitrate, in doses of 5 to 10 grains with chalk, and $\frac{1}{8}$ or $\frac{1}{4}$ or $\frac{1}{2}$ a minim of liquor opii sedativus according to the age, are the most efficient remedies."

In chronic constipation, treatment must be continuous to be effective.

Night terrors are not always evidences of the neurotic constitution, but may be due to simple nightmare, bad nurses, dreams of animals, etc., seen at the Zoo, overwork at school, worms, improper food; but most often to constipation.

In acute febrile attacks, antipyretics are apt to be used too freely. Debility, anemia and rickets are too much treated by drugs.

The last "fallacy" mentioned is one with which we emphatically dissent; that is, the local treatment of diphtheria by strong agents. He says: "Insufflation with iodoform or sulphur, or spraying with boric acid or corrosive sublimate solutions, are far more easy of application, and more effectual in antiseptic action." With such a notion of the proper local treatment of diphtheria, we can only conjecture that the author has been blessed with exceptionally mild cases, or that he is not very ambitious of success with grave ones. We read with less surprise, then, his condemnation of poultices in pneumonia; but agree with his objections to emetics in croup, and purging in spasms occurring in rickets.

MARRIAGES IN INDIA.—Statistics show that there are 200,000 widows in India between the ages of ten and fourteen years, and 80,000 who are younger than nine years.—*Progrès Méd.*

Letters to the Editor.

URETHRAL CHANCRE.

I HAVE a male patient who has a urethral chancre, and I cannot see the sore by opening the meatus. I know it ought to be cauterized, but don't know how to get at it. Please tell me how to treat it.

C. C. G.

[Don't try to cauterize it. Inject into the urethra an ointment of aristol and petrolatum, 1 to 20; and give mercury if the chancre is hard. If soft, use an ointment of iodoform, 1 part to 10 of petrolatum, or blow the iodoform in powder into the urethra.—ED. T. & R.]

THE KEELY "CURE."

I SEE your name mentioned in the Springfield (Mass.) *Republican* as having some experience with the bi chloride of gold treatment for drunkenness. May I beg you to suggest sources of detailed information touching that matter, or to supply such facts bearing upon the efficacy of the remedy as have come within your own observation.

REV. C. ELLWOOD NASH.

[It is hardly necessary for me to say that the statements put in circulation concerning my endorsement of the Keeley humbug are false. The Keeley Advertising Bureau appears to be as unscrupulous as it is audacious. The reports of the meeting of the Practitioners' Club, of Chicago, constituted a gross outrage on the gentlemen, whose remarks were garbled, omitted or deliberately falsified in order to make an "ad." for Keeley out of it.—WILLIAM F. WAUGH.]

A CARDIAC TONIC.

WHAT is your opinion of the following formula? It is known as Da Costa's tonic, but Prof. Da Costa repudiates its authorship, and says his name was appended to it without his authority:

R.—Nitro-glycerine..... gr. $\frac{1}{100}$.
Tinct. strophanthi..... gtt. ij.
Tinct. digitalis..... gtt. ij.—M.

T. M. B.

[The formula is objectionable in every way. The dose of nitro glycerine is too large, and that of strophanthus too small; while the digitalis is too little to do anything, good or bad. When strophanthus is indicated, it is for a prolonged tonic effect on the heart, leaving the arteries unaffected. Digitalis contracts the arteries, and hence is used for hemorrhages, or where a strong effect on the heart is desired; but should not be continued over a week. Nitro-glycerine gives a sudden and powerful stimulation, quickly passing away. It is for fainting or asthma. So that it is not easy to comprehend what sort of a case would call for these three remedies at one time.—ED. T. & R.]

TIME OF IMPREGNATION.

PROF. BOSSI has made a series of observations relating to the time when impregnation most readily takes place, and the length of time during which the spermatozoa preserve their integrity, as such, after they have lodged in the nidus seminis. The observer in the first place has noted a considerable number of clinical cases (twenty-seven), in which the

time of the sexual intercourse has been exactly ascertained. In the second place, he has made eleven experiments (nine successful) of artificial impregnation, accurately marking each time the relation to the menstrual period of the day on which the artificial injection of semen resulted in impregnation. In the third place, in order to get the explanation of the fact that impregnation is hindered or induced according as the intercourse took place in the first or the latter days after the menstrual flow, he has closely watched the time during which the vitality of the spermatozoa is preserved in the nidus seminis (twenty observations). The results obtained from these observations (particularities are described in the *Tourin Rivista di Ostetricia e Ginecologia*) are the following:

a. Impregnation follows intercourse when the latter takes place in the first days after the menstrual period; and besides it might be inferred, and not without reason, that the union of the spermatozoa with the ova occurs exclusively after the cessation of the menstrual flow; but never before nor during that period.

b. The vitality of the spermatozoa is preserved in the nidus seminis for seventeen days.

S. SEILIKOVITCH.

338 SPRUCE STREET, PHILADELPHIA.

ARE THERE ANY HOMŒOPATHISTS?

I ASSURE you it will interest many of your Alabama readers if you will answer a few questions in THE TIMES AND REGISTER regarding homœopathy, because the few there are here have been trying hard for several years to obtain recognition by being appointed on our Medical Examining Board. You live where you are thoroughly posted about them. We are largely ignorant of them, and in our estimates may be too much influenced by prejudice.

1. Do homœopathic physicians, as a class, now adhere to and practice according to the theories advanced by Hahnemann?

They are accused of not doing so, but of using remedies as other intelligent physicians do, such as experience has demonstrated to be useful, and are sailing under the homœopathic colors for the loaves and fishes.

Any information regarding their growth, present standing, etc., will be greatly appreciated by me. If you think best, the information may be given by private letter.

I have been an appreciative reader of THE TIMES AND REGISTER ever since the consolidation.

C. C. JONES, M.D.

EAST LAKE, ALA.

[In answering these queries we do so according "to our best knowledge and belief." When one gives his "impression," it must be judged by his own personality, to a great extent. The writer is very tolerant of other persons' beliefs; quite disposed to allow them to enjoy to the full extent the privilege of doing their own thinking, and the responsibility therefor; and claiming the same right himself. Others, more pugnacious or proselytizing, look on things homœopathic in a different light. 1. We know of no homœopathic physician in Philadelphia who adheres rigidly to the Hahnemannian doctrines. Not long ago there was trouble in a homœopathic hospital here, because the staff claimed the right to employ whatever remedies they pleased; while the managers insisted that only strictly homœopathic preparations should be administered. The result was that the staff resigned; and we believe a new one was appointed. The doctors who insisted in placing their

duty to the patient above the adherence to a therapeutic dogma received the hearty commendation of physicians in all schools; so far as we know, with scarcely a dissenting voice. If there was any action adverse to this taken by any homœopathic body, we did not hear of it, and will make the correction if notified. As to their growth, present standing, etc., we are unable to say more than that in Philadelphia there does not appear on the surface any perceptible alteration in their numbers or standing. The opinion is pretty general that, if the doors of the regular profession were opened to these gentlemen, there would soon be very little left of homœopathy as a separate school. But as there is no way into our ranks except by beginning at the alphabet and going through a three-years' course, the sectarian schools continue their useless existence. As the fierce passions of men become softened, and the spirit of toleration grows stronger, the rights of each individual to his own beliefs and practice are more generally admitted. This is the principle upon which our government is founded; it is growing rapidly in religious matters; the last in which men can or ought to make compromises; but of all the world, American medicine leads in intolerance and separatism. Let me add, to avoid misunderstanding, that this intolerance is far worse and more general in the homœopathic ranks than in our own.—ED. T. & R.]

NEURALGIA MAJOR.

I WRITE you for information, and I feel assured that you will not hesitate to give it, if possible. The same query I make of you I made in the *Med. World* about one year ago, and the result was I got at least seventy-five answers. All these are good answers, and are highly appreciated; but somehow or other I fail to get results that are desired.

It is concerning a case of nervous headache, and the patient is my wife. She is aged about forty-eight years, and has been subject to severe headaches all her life. Inherited it somewhat from her mother. If it was only of an ordinary character I would not be concerned so much. It, however, became so severe that she could not stand the terrible pain unless it was controlled by hypodermic injections of morphine, and it is a source of uneasiness to me regarding the effects in the future. It takes several doses while the attack lasts. It generally comes on without any premonitory symptoms that are noticeable. Most often she gets up in the morning with it, and it is felt over one eye or in the temple. In a little while she will vomit. This vomiting will be kept up every half hour or oftener. Especially if she stirs around much the vomiting will happen frequently about the second day. At first she seems rather pale, with no tendency of blood to the head. Cannot eat or drink, or if she does drink hot coffee or warm drinks they will be thrown up soon. The attack will last two to three days; frequently does not eat anything for from three to five days. She seldom passes over three weeks without suffering an attack. Always has been healthy with very little ailment, excepting this neuritic trouble. Used to happen about the time of menstruation; but I never could specially associate it with any irregularity in this respect. Will come on now without reference to menses. Had expected that at about this period in life she would have become better, or that the headaches would leave her. The last year, however, has rather been worse than before. Has always been able to do her work in and about the house. She is the mother of four girls, the

youngest of which is about fourteen years of age. I have no hesitation in saying that Mrs. K. is the worst case of the kind I ever gave medicine to. (I ought to have stated that after it remained a few hours in one temple, it would pass over to the other side, and then the suffering becomes extremely bad.) I have given her nearly all the new remedies that are recommended for this class of diseases; but the results are not satisfactory. Do not know whether I have given you a sufficient idea of the case in order that you may classify it. I had expected to write out a synopsis of treatment suggested in answer to my query in the *World*; but I never can find the time and inclination.

G. H. K.

[The severer forms of neuralgia require for their successful management the regulation of the personal and domestic hygiene to the minutest detail. We cannot give our correspondent better advice on this point than to refer him to Anstie's work on neuralgia, which will give full information. Since Anstie wrote, the dependence of neuralgia on the eyes has been brought prominently forward; and these organs should be examined, and any imperfection corrected. We have also remedies to break up the paroxysms that Anstie did not know; in fact, better than any he possessed; in antipyrine, acetanilide, and phenacetine. Either of these should be given a trial. In one case we recently obtained the best results from antikamnia, in doses of 2 grains every half hour. These may be alternated with chloral, in scruple doses; as all remedies for the paroxysm lose their virtue when employed too often. For the intervals give cod liver oil, and the following:]

R.—Phosphori..... gr. $\frac{1}{40}$.
Strychninæ sulph..... gr. $\frac{1}{40}$.
Acidi arseniosi..... gr. $\frac{1}{20}$.
Pil. ferri carb..... gr. iij.
Ext. aloes..... gr. $\frac{1}{8}$.

M.—S. In pill, thrice daily.

In one week drop out the phosphorus, and add a grain of quinine. If any of the other ingredients disagree, replace it by gold, silver, hydrastine, or capsicum. But keep up the reconstructive tonic medication persistently for months. At the menstrual periods give some uterine stimulant, as viburnum, cypripedium, or scutellaria. These, with careful avoidance of the exciting causes, will succeed in curing any neuralgia that is curable by strictly medical means.—ED. T. & R.]

The Medical Digest.

TROPICAL MALARIA.—In the *Satellite*, Levi recommends the following formula for malarial fevers:

R.—Quininæ sulph..... gr. lx.
Pepsinæ pulv..... gr. xl.
Capsici pulv..... gr. vj.
Zingiberis pulv..... gr. xij.
Sodii bicarb..... gr. lx.

M.—Pulv. et in chart. No. xij div.

S. One to be given every half to one hour till fever breaks; then gradually reduced.

FOR SPLENIC ENLARGEMENT.—

R.—Quininæ sulph..... gr. xl.
Ferri sulph. exsic..... gr. xx.
Acid. arseniosi..... gr. j.
Pepsinæ..... gr. xl.

M. et. in pil. No. xx div.

S. One after each meal.

ŒDEMA OF THE GLOTTIS.—Dr. de Mendoza has successfully treated three cases of severe œdema glottidis by means of hypodermic injections of pilocarpine. The dose was $\frac{1}{75}$ grain, and three injections were given within an hour.—*Semaine Médicale*.

TRAMPS, either amateur or professional, who suffer from sore feet after an unusually long walk, will experience great relief from soaking the feet once or twice a week in a half pailful of hot water, to which a piece of nitrate of potassium, the size of a small walnut, has been added.

KATZENJAMMER.—Resorcin is said to act admirably in cases of nausea and depression following a carouse. It is given in the dose of from 5 to 10 grains, in plenty of water, flavored with syrup of orange-peel, and may be repeated once or twice at intervals of half an hour. A single dose of 10 grains is, however, said to be usually sufficient.

—*N. Y. Med. Record*.

PISTOIA POWDER.—There is a powder made in a convent near Pistoia, Italy, which is used very extensively as a protective against gout. The following is said by M. Chastaing to be its composition.

R.—Bryonia root,
Gentian,
Chamomile.....ãã gm. x.
Colchicum root.....gm. xx.
Betony.....gm. l.

This is made into 365 powders, one of which is taken each day of the year in a full glass of cold or hot water.—*Hosp. Gaz.*

ALCOHOL.—The question as to the exact effect of alcohol in moderate doses is at present attracting a good deal of attention, some considering that although narcotic in large doses, it is stimulant in small; whilst others consider the apparent stimulus, to quote the words of Dr. Edmunds, as "due to the finer shades of narcosis." Dr. Cosgrave has collected reports of some investigations that throw some light on this point, including those of Ridge, Brunton, Parks, Hammond, Richardson, and others. The weight of the evidence goes to show that the action of alcohol is from the first narcotic rather than stimulant. With the exception of Dr. Smith all the observers found alcohol, even in small doses, lessened the quantity of carbonic acid exhaled.—*Dublin Journal Med. Sci.*

UNNA recommends the following application for the relief of obstinate eczema of the scrotum and anus:

R.—Iodoformi.....3ij.-iv.
Zinci oxidi.....3iss.
Aq. calcis,
Ol. lini.....ãã 3iss.
M.—Sig. For external use.

AMENORRHŒA.—The following is recommended as a reliable emmenagogue in many cases of functional amenorrhœa:

R.—Bichloride of mercury,
Arsenite of sodium.....ãã gr. iij.
Sulphate of strychnine.....gr. iss.
Carbonate of potassium,
Sulphate of iron.....ãã gr. xlv.
Mix and divide into 60 pills.
Sig. One pill after each meal.

—*Revue de Médico-Chirurgicale des Maladies des Femmes*.

INJECTIONS OF SERUM IN TUBERCULOSIS.—At the Congress on Tuberculosis recently held in Paris, M. Héricourt (*Semaine Médicale*), gave a summary of the results which he had obtained by means of injections of the serum of dog's blood in fifty cases of pulmonary phthisis and other tuberculous affections. He divided the cases into two groups; the first of these consisted almost exclusively of cases of pulmonary phthisis in the third stage, and in these the effect of the treatment was nil. In the second group, which included cases of phthisis in the second stage, lupus of the face, and advanced tuberculous disease of bones, definite amelioration was observed. This M. Héricourt attributes mainly to the improvement in the digestive function which took place under the treatment. In several of the phthisis cases there was a remarkable diminution in the number of bacilli in the expectoration. A cure was effected only in cases of phthisis in the first stage, in which it was not possible to prove the presence of bacilli.

SULPHONAL FOR ST. VITUS' DANCE.—The notable improvement in many cases of chorea, during the administration of sedatives such as chloral, sulphonal or bromide of potassium, has long been recognized by physicians. The experience of Dr. Jeffries with sulphonal has also been published, from which it appears that in five cases of first attack of recent origin all recovered under this treatment within three weeks; in two of these arsenic had failed; in two it was never used; in the fifth either arsenic or sulphonal alone failed; but together they were quickly followed by improvement. In five other cases in which sulphonal was employed—these being either of long standing or second or third attacks, and four at the perion of puberty—three of the patients got well, at least for a month; in three arsenic had failed; in two it was not used; two did not recover with any treatment. All the cases were also ordered a daily sponge bath, simple diet, and sleep in the middle of the day.

In some of the surgical clinics in Germany, there is now employed a glue for holding dressings in place—designed to be used in all those cases where elastic collodion and solutions of rubber are found so convenient, especially in holding dressings over fractures, while at the same time permitting free motion of the parts. It has the advantage of not cracking or breaking, of holding firmly, of being very pliable, allowing a great amount of motion, and, lastly, of not preventing the exercise of the function of the skin over which it is placed, so that there does not occur any peeling off of the upper layers of epithelium with a tendency to eczema. This glue is composed of glycerine, gelatine and water, of each 30 parts, and 10 parts of oxide of zinc, this making what is known as the thick paste; the thin paste has 30 parts glycerine, 20 parts gelatine, 40 parts water and 10 parts zinc oxide; the mixing of these elements is of course done over heat, and the paste is liquified over a water bath when needed. When ready to apply, the part is well dried with a brush, a ring made around the part to be inclosed, and the gauze of the dressing then laid on, care being taken to have the pieces cut large enough to allow the edges to extend into the ring of paste already laid on. Over this is placed a single or double layer of gauzes, cut somewhat larger; the whole is now painted over with the paste, and the dressing is finally daubed over with a bunch of cotton held in the hand.

SPASMODIC WRY-NECK.—Noble Smith has published a pamphlet on this subject, in which he arrives at the following conclusions:

1. Neither drugs, local applications, nor other general methods are of any permanent use in the treatment of well-established spasmodic wry-neck.

2. Electricity has failed to do any permanent good except in some recent cases, which probably differed entirely in their nature from those referred to.

3. Nerve stretching, although successful in a few cases, cannot be depended upon as a certain remedy.

4. Section and ablation of a piece of the spinal accessory nerve is absolutely certain to remove all spasm from the muscles supplied by that nerve, and is very likely to remove spasms set up in other muscles, although other nerves are apparently involved.

5. The most certain and satisfactory plan of operation is section of the nerve upon the inner side of the sterno-mastoid before it enters the muscle.

6. When other muscles remain spasmodically affected, the spasms may be removed by section of the nerves supplying those muscles.

7. The operations of section of the spinal accessory nerve, and of the posterior roots of the cervical nerves, are not followed by serious inconvenience to the patient from paralysis of the muscles.

8. There seems to be no risk of the reunion of the nerves and return of the spasms after operation.

9. It seems probable that other convulsive movements of the head may be remedied by section of nerves.

THE CONSTANT CURRENT IN PRURITUS VULVÆ.—Cholmogoroff (*Centralbl. f. Gynäk*) notes that no disease is more obstinate than that form of pruritus which is neither due to diabetes nor to irritating discharges from the genital tract. Schröder excised the skin over the area of irritation in these cases of "nervous" pruritus, but von Campe found that this operative measure does not always cure or even produce any effect on the pruritus. Blackwood first advocated electricity. Von Campe tried that agency in an unsuccessful case where excision had proved useless. The anode was passed into the vulvar cleft, the cathode passed all over the itching area, the current being maintained all the time. Dr. Cholmogoroff tried electricity in a very obstinate case, where the patient was thirty-six years old; the pruritus was intolerable, and nothing was to be seen except a few scratches on the vulva. All kinds of local applications had been tried in vain; even cocaine and vaseline and carbolic solutions had proved useless or of very temporary benefit. One application (20 milliamperes for ten minutes) gave marked relief. On the second day severe itching returned. After a few more applications, usually on alternate days, the relief became more permanent, and itching, when it returned, grew less and less. The treatment was suspended during two catamenial periods. The last application of electricity was six weeks after the first. Cure was then perfect, and four months later the patient had not suffered from any return of the pruritus.

CHLOROFORM ANESTHESIA.—Dr. Laurence Turnbull presented a paper to the Section of Surgery, at the last meeting of the American Medical Congress, the conclusions of which are given below. Dr. Turnbull has paid great attention to the subject of anesthetics, and his conclusions concerning them will be received as coming from an authority:

1. During the protracted use of chloroform as an anesthetic, the blood is changed in character, lowered in pressure, with weakening of the action of the heart and changes in its structure.

2. Dilatation of the heart occurs under the use of chloroform at all stages, and both sides of the heart, while the heart muscle is weakened.

3. Cardiac failure occurred before respiration in thirteen instances out of forty-three cases of death from chloroform.

4. The depressing influence of chloroform on the heart mechanism is not exerted through the vagus nerves, and section of both vagi does not obviate the weakening and dilating influence of chloroform on the heart.

5. Too many trifling operations are performed under chloroform; its use should be reserved for those cases in which ether, nitrous oxide, or cocaine will not produce the anesthesia desired.

6. Ether deaths, as a rule, occur in patients of a certain class, usually from obstructed respiration, and occasionally the heart will stop first, as in two of the four cases in our tables.

7. Watch both pulse and respiration, both in chloroform and ether; when the breathing becomes very rapid, danger is near.

These changes are apt to follow the first act of respiration. Chloroform vapor should not be employed over 4 per cent.

EUROPHEN.—This new antiseptic medicament designed to replace iodoform is obtained by the action of iodine upon isobutylorthocresol. Its pharmacology and bacteriology have been studied by Siebel, and its therapeutic action by Eichhoff.

Europen is an amorphous yellow powder, exhaling a slight odor resembling that of saffron. It is insoluble in water, and in glycerine, and more soluble than iodoform in alcohol, ether, chloroform and the oils. Europen adheres better than iodoform to the skin and to open wounds, and an equal quantity of it by weight, will cover a surface five times greater.

This iodide of isobutylorthocresol is not toxic. Dogs were found to take 2 to 3 grammes of it with impunity, and the human organism will bear 1 gramme of it without unpleasant phenomena, save a slight feeling of weight in the stomach.

The urine of patients who had absorbed europen did not contain iodine.

Eichhoff employed it successfully in dressing both hard and soft chancres. He used it as a powder, and also in the form of a 1 per cent. or 2 per cent. ointment. He furthermore employed it successfully in hypodermic injections for syphilitic patients suffering from the secondary and tertiary symptoms of syphilis. These injections consisted of 1 gramme of europen to 100 grammes of olive oil, and of this, $\frac{1}{2}$ to 1 cubic centimeter was injected daily in one dose. Eichhoff also employed europen in varicose ulcer in ulcerative lupus, as well as in eczema, psoriasis and favus, in all of which it proved to be efficacious.

Ointments containing 1 per cent. or 2 per cent. of europen are as strong as need be used. Five per cent. ointments caused a certain amount of irritation. —*La Semaine Medicale*, July 29, 1891; *Repertoire de Pharmacie*, August 10, 1891.

IGNIPUNCTURE IN HYPERTROPHIED CERVIX UTERI.—The length of time occupied by the usual routine treatment of a case of chronic hypertrophied cervix uteri can be considerably shortened by the judicious use of ignipuncture. The usual plans of

treatment—viz., tampons of glycerine, copious syringing with very little hot water, painting cervix with Churchill's tincture of iodine, etc.—occupy a very considerable time, which prolonged treatment (unless the patient is able and willing to pay for) "is more honored in the breach than the observance." Superficial firing by caustics or smoldering pieces of carbon held in contact with cervix by forceps is not sufficient in well-marked cases of chronic hypertrophy to obtain the desired results within a reasonable time. Having observed the good effects on enlarged tonsils by the employment of ignipuncture, I have given it a trial, and can strongly recommend it as a useful adjunct in these cases. A thermo-cautery of small size and point (Paquelin's) will be found the best for the purpose, but those who do not possess this valuable instrument can obtain equally good results with a copper rod, sharp at the point, and with solid bulb about half an inch from the top, so as to retain the heat while the necessary number of punctures are made through a wooden or celluloid cylindrical speculum. This cautery can be heated with an ordinary spirit-lamp till red-hot, held in the tissues for a few seconds, while each puncture, about a quarter of an inch, is made, and then withdrawn. There should be no bleeding observable if the operation has been properly performed, such being caused by the cautery being either too hot or too cold. My usual practice is to blow a little boric acid (with my vaginal insufflator) over the punctured surface, and make no examination for about a week, when the operation can be repeated if necessary. I have also found ignipuncture of great value in lacerations of the cervix when hardly bad enough to demand Emmett's operation. Little pain, if any, is produced, unless the operator is unwise enough to allow the patient to observe the preliminaries.

—Duke, *The Lancet*.

METHYL-BROMIDE.—Methyl bromide, a sharply-acting general anesthetic, the analogue of ethyl bromide in the ethene series, has lately been, it is reported, the cause of death in several cases in which it has been administered. As it acts with great rapidity, it has gained some favor in dental practice; but, of necessity, with considerable risk. Ethyl bromide, first used by the late Mr. Nunnerley, of Leeds, and afterward by myself, was discarded because of its danger; yet it is safe in comparison with the lighter methyl-bromide. The danger, as I have pointed out more than once, lies in the instability of these compounds. They decompose readily, and may permit free bromine to be liberated during inhalation; an accident followed by rapid spasmodic contraction of both the pulmonary and coronary arteries, with death by syncope of both the lesser and the greater circulations. Such accidents afford, unfortunately, the best proof of the folly of using any general anesthetic, until by careful experiment, the precise action of the substance has been determined. To practice first on human beings with agents so potent as these is the empirical method carried to recklessness, and ought really to come under the correction of law. In the case of the bromides, the administration is all the less excusable in that they have been tried experimentally, and pronounced dangerous, on the most reasonable and clear exposition of their physiological effects. The danger they produce, and the cause of the danger, has been explained and declared, but it can do no harm once more to declare it. The danger lies in three directions:

1. The bromides are unstable compounds. They are influenced by light, by temperature, and by exposure to the air, so that in administering them we can never be sure that we are not administering some portion of free bromine, which, in however minute a quantity, is a source of danger.

2. When the compound is fresh and uncharged it is of itself an irritant, and as such is more to be feared than chloroform, more than methylene, and much more than ether.

3. Its insolubility is against it. It acts quickly, because it acts immediately on the minute pulmonary circulation; but this very speediness of action is, in its case, its greatest disadvantage.—*Asclepiad*.

THE PHYSICAL ACTION OF ODORS.—The direct action of odors on the nervous centers is a subject worthy of careful research and study. Goethe had a strong dislike to the odor of apples; Schiller liked the odor. Some persons are made absolutely ill by the odor of onions that are being cooked; whilst other persons rather like it. The odor of the lily has a most potent effect in many instances, and I believe there is no person on whom it does not produce a sense of depression and nausea; I have known it cause positive faintness. I am myself always disagreeably affected by the odor of carbolic acid, and can never remain many minutes in a room where a trace of it prevails. In cases where the effect of an odor is instantaneous, it is fair to suppose that the impression made on the olfactory surface is transmitted direct to the olfactory center of the brain; but there must also, in certain examples, be a further transmission to the sympathetic ganglia.

The central seat of the olfactory sense must be very near to the central seat of memory, for it is noticeable that nothing recalls a past event like an odor. A little child was accidentally thrown out of a pony-carriage in a country lane. Near the spot where the fall took place there was a manure heap, which gave forth the peculiar dry ammoniacal odor so often recognizable from such heaps, an odor distinctive yet not altogether unpleasant. The child was stunned by the fall, and on recovering and returning to consciousness smelt this odor powerfully. Over fifty years have elapsed since that little mishap, and yet whenever the person referred to passes, in country lanes, a heap giving out the same odor, the whole scene of the accident recurs with every detail perfect, and sometimes with a recurrence of the giddiness and nausea which were experienced at the moment.

In some of the lower animals memory by odors is often singularly exhibited. In the dog the memory by odor seems a special part of the nature of the animal. The "scent" of the fox-hound and of the stag-hound is of this character. In the trained collie the remembrance of an object hidden, a stick, for instance, may be retained for three-quarters of an hour, so perfectly that the animal will fetch the object at command. But if the object be coated with something giving an odor which the animal is familiar with, the time is infinitely more prolonged.

Some odors lead to sleep, like the odor from dried hops; others lead to wakefulness, like the odor of dead flowers or leaves. Still others allow sleep but provoke the most terrible dreams, like the odors arising from a pillow in which feathers are decomposing.

Habit modifies the effects of odor. Merciless smokers laugh at the "faddery" of women who become faint if a smoker charges the air they breathe in a confined space, a small room or a railway carriage,

and are ready to compare the objection of a lady unaccustomed to the odor from the pipe or cigar with the carelessness on the matter shown by another lady who has become accustomed to the effect. But if a smoker gives up smoking and all contact with smoke for a few years, he is astounded at the unpleasantness of an air charged with smoke when he is then enclosed in it. I was once summoned, professionally, to a youth who was temporarily poisoned by inhaling the atmosphere issuing out of a small window of a club-room in which a number of men were smoking freely. They, in the body of the smoke, were not perceptibly affected; he, partly in the open air, was positively smitten to faintness by the empoisoned current from the room which flowed out of the window, and is still affected whenever he comes within the cloud of a pipe.

—*Asclepiad.*

THE TREATMENT OF LUPUS BY LYSOL.—Lysol is a saponified phenol derived from tar oils, or, rather, from cresols by the action of nascent soap; it is a liquid containing the higher homologues of carbolic acid. Lysol differs from creoline, to which it is related, by its most perfect solubility in all proportions of water. Comparative bacteriological tests have proved it to possess higher antimycotic powers than carbolic acid or creoline, while it is less variable in constitution than the latter, and less poisonous than either.

The liquid is well worthy of extended use by dermatologists and others called upon to treat lupus, for a short period of treatment by it suffices to produce a marked improvement in the appearance of the disease, and the results are so pronounced as to suggest a permanency, the reality of which only the lapse of time can, of course, determine. The surgeon, guided by a clear conception of the necessity for assiduous or watchful perseverance in the treatment of this disease, will perceive that this substance gives promise of ameliorative, if not of curative, power.

My plan is to apply, or direct the patient to apply, the lysol freely to the surface of the lupus patch by means of cotton twisted around a probe or wooden match, and to allow it to dry on. As in the employment of any other remedy intended to attack lupous nodules, it is first necessary to remove crusts and *débris* by the usual means. If this has been done, and it is found that the lupus is ulcerated, the lysol may be equally applied to the ulcerated and sound surface of the patch; it is not essential to first heal the ulcers, although if this be done by means of a simple ointment, the pain of the application is somewhat less than if made to the ulcerated surface.

Having applied the remedy myself, to show the patient how to proceed, I usually direct him to repeat the process once a day, or every other day, or less frequently if its use gives rise to much cracking of the epidermis or other inconvenience. Too frequent application is not desirable, besides being unnecessarily painful; for instance, if it be used at intervals of twelve hours, the second application is much more painful than the first. Its too frequent use causes either the formation of an impermeable and undesirable pellicle, as the result of its caustic action, or gives rise to superficial cracks in the epidermis, especially if the lupus is situated on a part of the skin naturally subject to tension. The immediate result of its application is to redden the parts, and sometimes to cause a slight œdema. This redness, with the overlying, undried film of the drug, gives the part a peculiar, translucent, moist, glistening, erythematous appearance, which gradually subsides

after the drying of the lysol. After a few days the scar is pliable, smooth, and of a good appearance from a cosmetic point of view, approximating the tint of healthy skin. The resulting scar seems even superior to that obtained after multiple scarifications.

The pain of the application is acute for half or three-quarters of an hour, quite disappearing in from two to three hours. This pain is less than that caused by the use of the multiple scarifier, and is not seriously objected to by patients to whose courage the prospect of the deforming sequelæ of lupus acts as a tonic.

In lupus of the nose or lips, since it is not easy to surmise how deep is the invasion, the disease should be attacked from both skin and mucous surfaces. The pain of application to the skin is much less than that to the nasal mucous-membrane, and here the prior use of strong cocaine pigments has not appeared to reduce the pain. Dr. Unna has used lysol in the form of a plaster mull, and appears to have been favorably impressed with it. It is classed by him among substances which do not produce pain, and he asserts that the use of the mull is nearly painless.—Phillips, *Brit. Med. Jour.*

DERMATOL is chemically a subgallate of bismuth, insoluble in water, alcohol, and ether. It forms a yellow powder similar in appearance to iodoform, but perfectly odorless. It is said to be stable and unaffected by exposure to light or air; it can even be sterilized by steam, either as substance or in the form of gauze, without decomposition. In surgery dermatol is to prove valuable as an antiseptic, astringent, and as an eminently drying agent. By virtue of this last property it has proved an excellent vulnerary, especially where the wounds are characterized by profuse secretion—in eczema, burns, ulcers; for the same reason it is successfully applied in the treatment of diseases of the eye and ear. This has been tried in the clinic of Fritsch by Glaeser, according to whom the remedy has a specially beneficial effect upon wounds, whether recent or old (laparotomies and other operations). It diminishes irritation, lessens secretion, furthers granulation, and thereby leads to a strikingly rapid healing-over of the wound. In hundreds of cases it proved itself perfectly non-poisonous. Being insoluble, it cannot be substituted for soluble and penetrating antiseptics.

EUROPHEN is an iodine compound allied to aristol, containing 27.6 per cent. of the antiseptic element in combination with isobutylcresol. It is an amorphous yellow powder, resinous to the touch and adhering to the mucous membrane or skin much more readily than iodoform; its odor is peculiar and aromatic, reminding of saffron. In water and glycerine it is not soluble, but readily so in alcohol, ether, chloroform, collodium, traumaticin and fixed oils. The oleaginous solution is suitable for subcutaneous injection after filtering. Its great advantage over iodoform is that it is much more bulky, so that a given weight will cover five times as much wound surface as the same quantity of iodoform.

GELFHORN records his experiences with **DUBOISINE SULPHATE** as a sedative and hypnotic. This is a mydriatic alkaloid isolated from *duboisia myoporoides*, a small tree or bush belonging to the *scrophulariaceæ* (or *solanaceæ*) which flourishes in the Australian colonies. The indigenes by boring the stem obtain a strongly narcotic and intoxicating juice, which is used for capturing fish. The alkaloid first prepared by Gerard (1878) was used as sulphate, by the author

above-named, in aqueous solution (1-250) both subcutaneously and per os. Single doses amounted to $\frac{1}{80}$ to $\frac{1}{40}$ gr., and the largest daily dose given was $\frac{1}{2}$ gr. Slight pain from the injections was complained of in isolated cases, but abscesses or large infiltration were not observed. The remedy was given to 21 patients, of which 5 suffered from paralysis progressiva, 2 from senile dementia, 6 from secondary imbecility, 2 from hallucinations, 2 from idiocy, and single cases from acute melancholia, periodic mania, hallucinations from injury and alcohol-nicotinism. Summing up his results, Gellhorn says: Duboisine sulphate is a prompt sedative in psychoses associated with excitement. Being without dangerous side-effect, it is to be hoped duboisine will, in course of time, entirely displace hyoscine, which certainly is not free from danger. In simple agrypnia there seems to be some doubt as to whether sulphonal is not prompter in action; in excited patients sleep was produced in most cases. The dose for subcutaneous injection is, for women, $\frac{1}{80}$ to $\frac{1}{50}$ gr.; for men, $\frac{1}{50}$ to $\frac{1}{30}$ *pro dosi et die*, and for administration per os (only used by me for women), $\frac{1}{80}$ to $\frac{1}{30}$ gr.

DR. ROSENTHAL has made an interesting study of the action of subcutaneous injections of iron in nervous affections. By personal experiment he ascertained that when a preparation of iron was administered subcutaneously, it was absorbed thirty to forty minutes after injection, and could be detected in the urine. From the basis of a long series of investigations the author recommends two iron preparations for hypodermic injection. One is the so-called ferrum peptonatum, obtained by the decomposition of ferric chloride solution with solution of pepsin, as a brownish-yellow powder, readily soluble in water. It is applied in aqueous solution (1-10), one syringeful being given every second day. The second suitable preparation is ferrum oleatum diluted to 1-20 by olive oil, and used similarly. Of the two, the former is preferable on account of its greater solubility and stability. The subcutaneous iron-treatment is recommended by Rosenthal in delicate neurasthenic persons and in the asthenic dyspepsia so often associated with anæmia, in which small doses of iron may produce considerable digestive disturbance. Unpleasant by-effects did not appear.—*Provincial Med. Jour.*

IS DRUNKENNESS CURABLE?¹—There is no medicine or combination of medicines that will cure a person of the habit of drunkenness—that will destroy his or her habit or appetite for alcoholic liquors. Appetites and habits are not under the control of medicines; nevertheless, the habit of drunkenness is curable, and the appetite for alcohol can be abolished.

There are three ways by which this end can be reached:

1. By absolutely stopping the manufacture, importation, and sale of alcoholic liquors.
2. By putting the person addicted under such restraint or into such seclusion that he cannot possibly get liquors.
3. By instructing him in regard to the injurious effects of alcohol upon his system, and, by mental influence, so strengthening his will power as to enable him to resist temptation.

The first means is probably altogether impossible of accomplishment, even if it were desirable to accomplish it. The sale of alcoholic liquors should be regulated by the State, and much may be done to prevent drunkenness by such wise interference as

will not only insure the purity of liquors, but prevent their sale by improper persons.

The second means—sequestration of the drunkard—may be accomplished, and must form in the majority of cases the means of treatment of the habitual drunkard, or of the one who drinks spasmodically. In mild cases the person may be allowed to go at large, accompanied by a faithful attendant. In the majority of cases there must be actual imprisonment, in an inebriate asylum, a hospital, or a jail, the latter proving by far the most effectual.

As to moral suasion, the third means, it is mainly successful, with those unfortunate but intelligent persons who strongly desire to be cured. These are the patients to whose honor we can best trust, and the ones who are most generally cured.

I do not say that medical treatment is to be entirely neglected. Certain tonics and sedatives are required to overcome conditions produced by the taking away of the customary stimulant. But as to nitrate of strychnine, which has had its day, and the double chloride of gold and sodium, now being palmed off as a certain cure for drunkenness, I say they have never effected a single cure.

There is one means of cure not yet sufficiently tried, but which gives good therapeutical promise; and that is hypnotism. But as comparatively few persons are subject to its influence, its range of usefulness cannot be large.—*Wm. A. Hammond.*

Mental degeneration and obscure forms of psychical disturbance, associated with a craving for spirits that dominates every consideration of life, point to a form of insanity in which both brain and nervous system appear to suffer from paralysis and exhaustion. The use of spirits may cause the paralysis and favor the exhaustion which proceeds from it. Intoxication exhibits in a concentrated form the common types of insanity, mania, melancholia, and dementia in a brief time. The injury from these states must be very great, and the inference that the demand for spirits is often a symptom and not the disease is amply confirmed.

Curability follows the application of certain general principles, the first of which is isolation and change of surroundings. The drunkard must go into quarantine, where all his surroundings will antagonize his disorder and assist nature to return to health. Here the diet, baths, exercise, medical study and care, with all other means, can be applied with military exactness. The drink-impulse is overcome and dies away with the increasing vigor of the mind and body. The facts adduced by years of scientific study and investigation sustain the opinion that all drunkards, both recent and chronic, should come under legal control and be put into quarantine asylums until cured, or be retained for lifetime. Such asylums are practicable, and many cases are curable through their agency which are made worse by the present blundering methods to improve them. The spirit traffic should be specially taxed to build and maintain such refuges—just as railroads and other corporations are made responsible for damage done by them.

The curability of the inebriate is far more certain than that of the insane. The liberty of both is equally dangerous. The moment a man becomes a drunkard he forfeits all right to liberty, and becomes a ward of the State, which should control him. He is mentally and physically sick, and needs the same help as the insane. Not far in the future the drunkard will receive proper treatment and be cured, and the mysteries of the drink-problem will disappear before the march of scientific truth.—*T. D. Crothers.*

¹ *North American Review* for September.

Some men are born drunkards, some achieve drunkenness, and some have drunkenness thrust upon them. The question whether it can be cured is, like many other physiological and pathological queries, not yet settled. The reason for its remaining open is not difficult to see, since it relates to such a variable quantity as man.

To attempt to cure the confirmed inebriate by appealing merely to his moral sense as against the morbid craving of a diseased stomach and brain would seem futile. He may acknowledge and appreciate the truthfulness of the argument, and yet have no will to enforce it. The best he can do is to place himself in a situation where his physical powers will be restored, and where he will be free from social influences inducing him to drink.

It has been claimed for chloride of gold that it is a specific for the effects of drunkenness, one physician claiming to have made permanent cures of 95 per cent. of his cases. It is difficult to see how he can claim permanency of cure of this percentage unless the patients are all dead. The writer's experience with chloride of gold in many cases has not convinced him of its efficacy. Drugs alone are not likely to cure inebriety.

A brilliant young man who had become a drunkard, courted in one of his infrequent sober periods, a young woman who reciprocated his love and promised to marry him after a perfectly sober life of two years. He engaged himself to work in an institution, where abstinence from all intoxicants was the law. He won, and is now a successful business man, and not a drunkard. The most we can expect is that the inebriate in his lucid moments may have sense and will enough to put himself under conditions favorable to recovery.—*E. N. Carpenter.*

Recovery from habitual drunkenness is not the rule. The peculiar mental conditions with which the drunkard starts on his career are so acted on by alcohol and the adulterants combined with it, that his case is almost hopeless from the first. Preventive measures are worth many pounds of cure. Restrictive liquor laws are first in order of importance. The easier it is for men to get liquor, the more they will get drunk.

Removal from temptation is easily accomplished by means of the many public and private inebriate asylums, the good work and value of which in the United States cannot be questioned. They are often the means of effecting cures even in exceptional cases.

—*C. Edson.*

GERMAN NOTES.

HERMAN D. MARCUS, M.D.

ACTION OF NITROGLYCERINE.—Dr. Bela Bosányi recommends nitroglycerine as stimulant in cases in which quick action is more imperative than a permanent influence. Nitroglycerine has the advantage that it can be used in some acute diseases for quite a long time without showing any ill effects. In pure nervous angina pectoris $\frac{1}{100}$ gr. of this drug will cure the attack after a few seconds.

—*Pest. Med. Chir. Presse.*

A CURE AGAINST CARCINOMA.—Dr. Marcus Fáy (Gesellsch. d. Arzts in Debreczin) cites following cure of carcinoma:

The patient, a woman seventy-seven years old, came under his treatment in March, 1890. He found patient in bed, showing hydropic lower extremities, the right mamma extremely swollen, of a bluish

color, uneven surface, very hard, adherent, and the axillary glands terribly enlarged. Two places on the upper part of the breast were ulcerated with thin fetid discharge.

Surgical interference being out of the question, Fáy ordered the patient to paint the ulcerated surfaces frequently with tr. creosoti cum opio, which treatment had a tendency to alleviate the pain and to remove the fetid odor. Internally he prescribed aniline in very small doses, and as this treatment stopped the pains he ordered aniline externally on the wounds. Patient then gradually improved, and in August was able to come to his office. Owing to the disagreeable coloring of the aniline, the sulphate of this drug was then prescribed. After three weeks' use of this remedy the dropsy disappeared in the lower extremities, the adhesions and the new-formed tissues began to shrink, showing the breast to be freely movable by October, and the swelling of the axillary glands disappeared. The patient continued to improve and is at present in the best of health.

Dr. Fáy refrains from drawing any conclusions from this case, nor does he try to explain the action of the aniline.—*Pest. Med. Chir. Presse.*

ARISTOL.—Aristol has been used in Kaposi's clinic in twenty-three cases of psoriasis in the form of 10 to 20 per cent. salves. The action of this remedy was found to be a great deal slower than that of pyrogallie acid, and in more severe cases entirely unsatisfactory. In light attacks it was found to act very good, especially in cases where coloring or exciting remedies were objected to. Eight cases of eczema in the squamous stage were very much benefited by this drug. It was found of no value whatever in favus and alopecia areata, as well as in a case of lues ulcerosa gummosa.

—Weissblum, *Arch. f. Dermat. und Syph.*

DIPHThERIA.—I. W. Kuznecow recommends menthol and naphthaline in the treatment of diphtheria. He prescribes:

R.—Mentholi..... 3.75=3j.
Alcohol q. s. ad sol. et adde,
Solut. naphthalini..... 3.75=3j.
Ol terebinthin..... 7.5 =3ij.
Glycerini..... 7.5 =3ij.

M.—S. Shake well and paint parts twice to thrice daily.

Internally he uses antipyrine and sodium benzoic in peppermint water, and as a gargle, aqua calcis. This treatment must be continued two to three days. The patients feel, on using above remedy, at first a slight burning, then a sense of cold in the throat, which feeling is soon followed by great relief on breathing.

—*Allg. Mediz. Central Zeitung.*

Medical News and Miscellany.

DR. HERBERT A. STARKEY, of Hegewisch, has opened an office in Harvey, Illinois.

PROF. NANCREDE has been very successful in Ann Arbor; where he is exceedingly popular, professionally and personally.

DR. FRIEDRICH SCHANTA, late of the German University in Prag, has been appointed to the Chair of Obstetrics and Gynecology, recently vacated through the death of Dr. Karl Ritter von Braun. Dr. Schanta, who is a graduate of the Vienna University and has been assistant to Dr. Spaeth, has succeeded in reaching the highest step of the medical profession.

THE *Lancet* and the *British Medical Journal*, of September 5, are educational numbers, devoted to a compendious statement of the medical schools, hospitals and examining boards in Great Britain and Ireland.

THE Medical Faculty of Toronto has published a number of the lectures delivered in the post-graduate course. Among them is an excellent article by Dr. Abbé, on the Present Limitations of Spinal Surgery; and several interesting papers on typhoid fever.

OF the twenty-six patients sent to a British hospital as suffering with small-pox, in 1889, only five really had that disease. It looks as if our cousins needed an Examining Board, or a reform in the method of teaching, as relates to infectious diseases.

TROUBLE has arisen in the Beth Israel Dispensary, New York, where the old staff has resigned in consequence of the managers' action in appointing three new members without consulting the old ones. Financial difficulties and neglect of duties are also freely charged.

DR. BENA of Zacatecas, Mexico, strongly recommends that city as a sanatorium for phthisical patients. He and several other medical men who have practised there for some years, agree in declaring that they never see any cases of phthisis amongst people of the better classes who have lived for any great length of time in Zacatecas.

A PRESCRIPTION clerk in a Hessian pharmacy had occasion quite recently to dispense a mixture of a 10-200 chromic acid solution, salicylic acid and alcohol. Not bearing in mind the chemical nature of chromic acid he introduced the crystals directly into the alcohol, as a consequent of which an explosion occurred, resulting in the man's loss of eyesight.

Two Edinburgh young men resolved to have a continental tour during their holidays. The one was the son of a chemist, and the other of a noted distiller. They resolved to travel under foreign names. The chemist's son assumed the name of Count Pestile de Mortar, and the distiller's, Count Cask o' Whisky; and they traveled in these names throughout several European countries without ever having been challenged.

In the *Zeitschrift für Hygiene* appears an article emanating from the Bureau of Animal Industry, in which Frosch's publication on the swine-plague is attacked. Frosch, however, contributes a rejoinder that completely establishes his position, and gives Dr. Billings the credit he deserves. The whole of this dispute, however, has furnished ample proof that "truth will prevail;" in spite of personal favoritism and the weight of official position.

A FRENCH physician has been sentenced to pay a fine of one hundred francs for malpractice under the following circumstances: The doctor prescribed for neuralgia (tooth):

R.—Aconitin gr. $\frac{1}{100}$ = 0.001.
Antipyrin gr. viiss = 0.5.
M.—Fiat chart, No. ii.

without specifying whether crystallized or non-crystallized aconitin should be used. The druggist had no milligramme weight, and weighed a centigramme, dividing the mass in ten parts, as is often done. Though Dr. Brouardel testified that the dose of aconitin has not been officially found yet, still the physician was sentenced.—*Ex.*

In the *British Medical Journal*, of September 5, is recorded a death attributed to epsom salts. One ounce was taken by a female servant twenty years old, on going to bed. Next morning she was found dead, not having undressed. The stomach was not inflamed, and contained a little of the salts in solution. Death was supposed to have been caused by syncope.

A RECENT investigation into the Boston City Hospital brought out many letters to the press showing abundant room for improvement in the management. The trustees dismissed the charges, and the supervisor making them was discharged. This is a ready way of reforming abuses that is not unknown in other hospitals, where the uncomfortable individuals who "want to know, you know," are apt to be bounced or squeezed out.

SPECIALISTS IN AUSTRIA.—The Austrian government has promulgated a law regarding the practice of the various specialties in medicine and surgery. According to this, no physician can style himself a specialist in any branch of medicine, unless he furnishes proof that he has devoted special study to the diseases he professes to treat. This rigorous action appears to be justified by the fact of the existence of so many specialists of all kinds, who are only such in name only so far as a large majority is concerned.

—*Ex.*

COFFEE-DRINKERS IN EUROPE.—According to a calculation published in the *Lancet*, but for the accuracy of which that journal will not vouch, the Dutchman drinks on an average 16½ pounds of coffee per year; the Belgian about half that quantity; the Norwegian about 6¼ pounds; the German about 4¼ pounds per head, being about 2 pounds more than the Frenchman, who has the reputation of being a great coffee-drinker; whereas, according to statistics lately taken, the Englishman consumes only ½ a pound a year, and the Russian ⅓ of a pound.—*Ex.*

A NEW hospital in Jerusalem was recently established by the Turkish authorities, but when it came to form the *personnel* of the institution a peculiar difficulty presented itself. The patients would be of all races and religions in proportion to the population of the city, and it was feared that partiality would be shown by the attendants to the patients of their own faith. The majority of the population is Hebrew, the Mohammedans coming next, while the Christians are in a minority. It was thought better, therefore, to select the nurses from the followers of the Christian religion, and consequently the hospital was placed in charge of Sisters of Charity.—*Med. Record.*

THE water of the Dead Sea has been supposed to be so completely devoid of life that it has been proposed as an antiseptic fluid. But Lartet has shown this to be a mistake. He placed some nutritive material (doubtless sterilized) in contact with mud from the bottom of the Dead Sea, and from it cultivated the microbes of *gangrene gazeuse* and of tetanus. Guinea-pigs inoculated with the mud became tetanic and died of gangrenous septicemia. The Dead Sea water contains per liter over 60 grammes of chloride sodium, 160 chloride magnesium, 9 chloride potassium, 10 chloride calcium, 5 bromide magnesium, and 0.78 bromide calcium; in all, over 246 grammes of salts per liter. Yet in this solution the microbes mentioned have existed for an indefinite period.

—*Literary Digest.*

It has lately been suggested that music might prove a useful adjunct (in some cases at least) where the usual routine treatment had not been satisfactory. We venture to suggest the following airs as being suitable for the cases enumerated, viz.:

Retarded labor from inertia.—“Comin’ Thro’ the Rye.”

Cases of chronic deafness.—“Come Back to Erin.”

Epilepsy.—“Let Me Like a Soldier Fall.”

Pyrexia.—“The Coolin.”

Melancholia.—“The Heart Bowed Down.”

Cases of doubtful diagnosis.—“Oh, Dear! What Can the Matter Be.”—*Med. Press.*

THE officials of the sick fund for persons employed in public-houses in Berlin, have requested the central police office to issue an order forbidding waitresses to sit down at the tables beside the guests, to press them to drink, and to drink with them. The petitioners declare that, though the contributors to the fund are numerous and the contributions pretty high, it is threatened with exhaustion, because it has to disburse unheard-of sums for the aid of 2,500 waitresses in sickness. Most of them suffer from abdominal and stomachic complaints, and a considerable number of them are in receipt of almost uninterrupted support from the fund. The doctors unanimously attribute this epidemic to the excessive drinking of beer, cognac, etc.

TOBACCO is as much a king here as at home. The cigar is common, the cigarette universal, but more popular still is the hubble-bubble, or Chinese water-pipe. It is a small, metal box, oblong, with round corners, from which rises a long-curved tube terminating in an amber mouth-piece. The box is divided into two compartments—one, with a square lid, which contains a little store of tobacco cut as fine as sewing-silk, and the other partially filled with perfumed or fresh water. Into the water dips a hollow metal cylinder, the upper-expanded end of which will hold enough tobacco to make two or three whiffs of smoke. These pass through the water and the long tube before reaching the smoker, and are then cool and very mild.—From “A Tiffin with a Taotai,” by Dr. Edward Bedloe, in October *Lippincott's*.

It is a hopeful sign for India that her own people are taking up the question of hygiene. At the Congress of Hygiene three papers were presented by natives, treating of the sanitary condition of India. One of these thus describes the Indian village:

“What is the normal sanitary state of an Indian village? Imagine a collection of low huts, mostly straw-roofed or thatch-covered, the cattle tethered in the hut side-by-side with the human inmates. The cattle generally consist of cows, bullocks, and buffaloes; occasionally there are pigs, donkeys, goats, and fowls. These inmates of the hut are in open air during the day, but at night lie upon the ground beside their master and master's wife and children. There is hardly a window or an opening for ventilation.”

“When women are confined they are shut up in rooms almost hermetically sealed; they breathe and rebreathe the limited and confined air for months together; the air is further vitiated by a lamp being kept up in the room, burning day and night. Owing to these habits, many a woman falls prey to pulmonary consumption without any hereditary taint. When a person is sick, he is generally confined in a room well closed up, so as not to admit any air. Many cases of fever thus become aggravated and end fatally.”

ANENT the Richardson scheme that is working the unsuspicious journalist for a lot of free advertising, the *Covert Medical News* gives the following advice to the retailer:

“Let the retail druggist throw the whole patent medicine business out of his store; let him dispense only reliable preparations of known composition and made by first class-manufacturing pharmacists; let him court the confidence the public is learning to place in his judgement; let him give a customer a candid answer when his opinion is required in regard to any medicinal preparation; let him use all the energy possible in making his calling dignified and professional, and under no circumstance degrade his chosen vocation by acting as a tool to aid any patent medicine shark in swindling the public.”

SCOTCHMEN are not usually ashamed of their nationality, and if all their boys are like the one described as follows in the *Hospital Gazette*, they have very good reason to be proud:

“A boy, while gathering white heather, had the misfortune to be bitten by an adder, and fearing evil consequences from the bite determined to amputate the finger bitten. This he at once essayed to do with his pocket knife, but having no previous knowledge of anatomy could not get the finger off as he wished. At last he managed to get into the joint, and with a courage that did him credit amputated the finger in a way, and having done so proceeded to a medical practitioner to have the finishing touches put to it. So far no evil results have followed the rude operation performed by the adder or the boy.”

THE State of North Carolina has recently decided in two cases that telegraph companies are liable for damages in cases where great anxiety and mental shock have followed negligence in delivering messages, as where a husband is prevented from knowing of his wife's sickness and being present at her death and burial, or of knowing of her confinement.

It has also decided that the person to whom the message is sent can maintain the action, and that as no absolute rule of damages is possible their admeasurement must be left to the jury.

A few other States have made similar decisions, and the physician who can appreciate the depression and damage incident to such disappointment, both to the sick and their friends, will understand the justice of the ruling.

MEMPHIS had a lesson in sanitary science administered in 1878, by yellow jack. How effectual it has proved, and how well the efforts of Memphis sanitarians have been rewarded, may be seen from the following table, taken from the *Memphis Journal of the Medical Sciences*:

	DEATHS PER 1,000 POPULATION.
New York.....	24.58
Baltimore.....	22.41
Chicago.....	18.22
Cleveland.....	19.08
San Francisco.....	19.33
Pittsburg.....	20.74
Richmond.....	23.18
Charleston.....	27.94
Mobile.....	21.17
Memphis—White.....	19.33
Memphis—Colored.....	26.15
Memphis—Total.....	22.40
Memphis—Residents proper.....	16.21

DR. W. D. BIDWELL has returned to his home in Washington, D. C., from a three weeks' vacation; which included a yachting trip along the coast of Maine.

WEEKLY Report of Interments in Philadelphia,
from September 12 to September 19, 1891 :

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess.....	4		Inflammation bladder.....	1	
Anæmia.....	1		" brain.....	3	9
Aneurism of the aorta.....	1		" bronchi.....	2	2
Alcoholism.....	1		" kidneys.....	3	
Apoplexy.....	8		" larynx.....	1	
Bright's disease.....	8		" liver.....	2	
Cancer.....	11		" lungs.....	9	4
Casualties.....	6	1	" peritoneum.....	2	
Cerebro-spinal meningitis.....	1	1	" pleura.....	1	
Congestion of the brain.....	1	5	" s. & bowels.....	5	12
" lungs.....	3		" tonsils.....	1	1
Cholera infantum.....	30		Insanity.....	1	
Cirrhosis of the liver.....	3		Jaundice.....	1	1
Consumption of the lungs.....	43	7	Locomotor ataxia.....	1	
Convulsions.....	12		Malformation.....	1	1
" puerperal.....	2		Marasmus.....	1	24
Croup.....	5		Neuralgia of the heart.....	1	
Cyanosis.....	4		Old age.....	9	
Debility.....	3	2	Paralysis.....	10	
Diarrhoea.....	1	1	Poisoning.....	1	
Diphtheria.....	1	18	Pyæmia.....	1	2
Disease of the heart.....	19	2	Rheumatism.....	2	2
" kidneys.....	1		" Scrofula.....	1	1
Drowned.....	5	2	" Septicæmia.....	1	1
Dropsy.....	2		" Softening of the brain.....	1	
Dysentery.....	1	1	" Suicide.....	1	
Enlargement of the heart.....	1		Syphilis.....	2	1
Fever, scarlet.....	1	6	Tabes Mesenterica.....	1	1
" typhoid.....	12	5	Teething.....	1	3
Gangrene.....	1		Tumor.....	5	
Hemorrhage.....	1	1	Uræmia.....	1	
Hernia.....	1		Whooping cough.....	1	3
Homicide.....	1				
Inanition.....	11		Total.....	204	185

A GREAT change has been introduced into the Commissariat Department of the London County Lunatic Asylums by the substitution of milk or other non-alcoholic beverage for beer in the diet of physically healthy lunatics. The result, we are told, has been most gratifying, the general standard of health of the inmates having improved, and they have become much easier to manage. The medical superintendents are practically unanimous in approving of the change, which has been specially beneficial in the case of epileptics, whose infirmities of temper are much less than they used to be, and whose liability to fits in many instances has been distinctly lessened. The attendants have the option of retaining their beer, or of receiving an allowance instead, and 90 per cent. of them have decided in favor of the allowance.

MORTALITY OF FOUNDLINGS.—According to the Austrian Statistical Handbook, published in 1888, the total number of foundlings in Austria reported for 1886 was 42,877, of whom 5,615 died, or 13.09 per cent. Of those retained in hospital, 6.71 per cent. died, and of those sent outside to the country nearly 15 per cent. died; the averages for the years 1882 to 1885, inclusive, show about the same as those given for 1886, the presumption also being that many sent from town died, but, having been lost sight of, the death did not figure on the records of the institution. As compared with the official statistics of foundling mortality in Paris, the difference is surprising. There were in Paris, in 1874, 2,171 foundlings, of whom about 35 per cent., or 758, died within twelve months; in 1875, 1,720 foundlings, of whom some 40 per cent., or 694, died within twelve months; in 1876, 1,648 foundlings, of whom about 34½ per cent., or 568, died within twelve months; in 1877, 1,493 foundlings, of whom about 36 per cent., or 540, died within twelve months; in 1878, 1,880 foundlings, of whom about 34 per cent., or 643, died within twelve months; and of those who succumbed during this series of years, from 36 to 48 per cent. in the different years died in the first seven days.

—*Med. Record.*

SOUTHERN CALIFORNIA.—A recent writer in the *Lancet* remarks that all persons in the following category should seek a decided change of climate :

All those to whom daily fresh air is indispensable, and who are unable to take such exercise unless under favorable meteorological conditions; all those who from any cause are peculiarly susceptible to changes in temperature and hygrometric conditions, and who, as a consequence of such changes, are prone to catarrhs or deep seated inflammations; all those in whom a succession of wet and sunless days profoundly depresses the mind and the physical energies.

A little reflection will show that the diseases coming under these various categories are phthisis, bronchitis, rheumatism, marked constitutional delicacy; and delay convalescence, either from a surgical operation, as specific fever or acute inflammation; and experience has demonstrated the peculiar adaptability of extreme Southern California for these cases. Indeed, A. W. Greely, Brigadier General and Chief, Signal Officer of the United States Army, remarking upon the favored climatic localities of our countryf says: "There is, possibly, one place in the United States that such conditions obtain—a bit of country of about forty square miles, at the extreme southwestern part of the United States." This, it is needless to remark, is the coast and foothill strip of Southern California.

An important and no less vital question that the health seeker must ascertain is the accommodations that are afforded by the selected locality; indeed, it is worse than foolhardy for the invalid to leave home, and all the word implies, to cast his lot among strangers in a strange land, to be obliged to find out for himself that which is good and reject the bad.

—Peck, *Kansas City Med. Record.*

PRELIMINARY ANNOUNCEMENT of the programme for the Seventeenth Annual Session of the Mississippi Valley Medical Association, to be held in St. Louis, October 14, 15 and 16, 1891 :

1. The Toxic Effect of Tobacco Vapor; with Report of Cases. W. Carroll Chapman, M.D., Louisville, Ky.

2. The Management of Chronic Diseases. S. Baruch, M.D., New York, N. Y.

3. The Ethics of Curing Consumption and other Chronic Diseases. John Ashburton Cutter, M.D., New York, N. Y.

4. The Treatment of Typhoid Fever. Robert C. Kenner, M.D., Louisville, Ky.

5. The Sulpho carbolates. William F. Waugh, M.D., Philadelphia, Pa.

6. On Degenerative Processes in the Spinal Cord, Consequent upon Constitutional Diseases. Hugo Summa, M.D., St. Louis, Mo.

7. Iliac Indigestion—Intestinal Dyspepsia—and its Treatment by Antiseptic Agents. Frank Woodbury, M.D., Philadelphia, Pa.

8. The Influence of Grave-yards on Public Health. J. W. Carhart, M.D., Lampasas, Texas.

9. Rheumatism and Gout in their Casual Relation to Eczema; their Management. A. H. Ohman-Dumesnil, M.D., St. Louis, Mo.

10. The Value of Epilation as a Dermato-therapeutic Measure. Joseph Zeissler, M.D., Chicago, Ill.

11. Gradation of Lenses. Dudley S. Reynolds, M.D., Louisville, Ky.

12. The Influence of Alcohol on Vision. Francis Dowling, M.D., Cincinnati, O.

13. Tobacco and Insanity. Ludwig Bremer, M.D., St. Louis, Mo.

14. The Present Aspect of Cerebral Surgery. Landon Carter Gray, M.D., New York, N. Y.
15. Forensic Aspect of Bruises and Fractures in the Insane. J. G. Kiernan, M.D., Chicago, Ill.
16. Amputation of the Scrotum, with Report of a Case. B. Merrill Ricketts, M.D., Cincinnati, O.
17. Observation on Urethral Stricture. G. Frank Lydston, M.D., Chicago, Ill.
18. The Mechanical Element in Treatment of Compound Fracture. Warren B. Outten, M.D., St. Louis, Mo.
19. A Report of a Case of Retention of Urine caused by Multiple Urethral Calculi. J. V. Prewitt, M.D., West Point, Ky.
20. Some Observations on Rectal Surgery in Europe. Leon Straus, M.D., Louisville, Ky.
21. A New Method of Diagnosing Obstruction in the Sigmoid Flexure. Jos. M. Mathews, M.D., Louisville, Ky.
22. Pathology and Surgical Treatment of the So-called Strumous Inguinal Lymphadenitis. L. T. Riesmeyer, M.D., St. Louis, Mo.
23. The Treatment of Gonorrhœa. E. C. Underwood, M.D., Louisville, Ky.
24. Extirpation of the Thyroid, with Report of Case. Emory Lanphear, M.D., Kansas City, Mo.
25. Are Conservative Amputations Always in the Interest of the Patient? Charles Truax, Chicago, Ill.
26. Sarcoma of the Dorso-scapular Region—Operation—Recovery. George N. Lowe, M.D., Randall, Kas.
27. Mouth Breathing. Eric E. Sattler, M.D., Cincinnati, O.
28. Empyema of the Superior Maxillary Antrum, with only Nasal Symptoms. Hal Foster, M.D., Kansas City, Mo.
29. A Superior Remedy for Nasal Catarrh; Campho-menthol. Seth S. Bishop, M.D., Chicago, Ill.
30. A Case of Reflex Aphonia; Demonstrated to be due to Pressure of the Middle Turbinate against the Septum Nasi. Hanau W. Loeb, M.D. St. Louis, Mo.
31. Importance of Recognizing a Temporary Rachitic Condition in Infants. John A. Larabee, M.D., Louisville, Ky.
32. A Pathological Study of Pelvic Inflammation in Women. Wm. Warren Potter, M.D., Buffalo, N. Y.
33. Observation on the Management of Uterine Tumors. Chas. A. L. Reed, M.D., Cincinnati, O.
34. Complications Following Abdominal Section. Rufus B. Hall, M.D., Cincinnati, O.
35. Obstetric Dispensaries; their Management. L. A. Berger, M.D., Kansas City, Mo.
36. Surgical Treatment of Peritonitis. A. V. L. Brokaw, M.D., St. Louis, Mo.
37. Temperature no Guide in Peritonitis. H. C. Dalton, M.D., St. Louis, Mo.
38. Some Monstrosities at and after Birth. David S. Booth, M.D., Belleville, Ill.
39. Oophorectomy vs. Donothingism. Willis P. King, M.D., Kansas City, Mo.
40. A Successful Gastrostomy for Impermeable Stricture of the Cardiac End of the Oesophagus—Subsequent Dilatation of the Strictures. Arch. Dixon, M.D., Henderson, Ky.
41. The Nervous Equation of Pelvic Inflammation. Geo. F. Hulbert, M.D., St. Louis, Mo.
42. Hysterectomy for Cancer. J. M. Richmond, M.D., St. Joseph, Mo.
43. The Application of the Obstetrical Forceps. John Bartlett, M.D., Chicago, Ill.

44. Appendicitis. W. H. Link, M.D., Petersburg, Ind.

45. Phthisis—Beginning its Treatment. Edward F. Wells, M.D., Chicago, Ill.

46. The Hydrotherapy in Typhoid Fever. H. H. Middlekamp, M.D., Warrenton, Mo.

47. Hystero-Epilepsy. Howell T. Perching, M.D., Denver, Col.

48. Importance of Definite Strength in Mineral Waters. Geo. F. Hulbert, M.D., St. Louis, Mo.

49. The Time and Place for Stimulants. Chas. H. Hughes, M.D.

Regular classified programme will be issued and sent to members, and the profession generally, at an early date. Titles of papers must be sent to Chairman of Committee of Arrangements before October 5, 1891.

I. N. LOVE, M. D.,
Chairman Committee of Arrangements, Grand and Lindell avenues, St. Louis.

E. S. MCKEE, M. D., Secretary.

C. H. HUGHES, M. D., President.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending September 19, 1891.

HOEHLING, A. A., Medical Inspector. Ordered as member of Medical Examining Board.

HAYMON, G. E. H., Surgeon. Ordered to the U. S. S. "Yorktown."

BOYD, JNO. C., Surgeon. Detached from the U. S. S. "Yorktown," and granted leave.

DUBOIS, F. L., Medical Director. Detached from Navy Yard, Portsmouth, N. H., and wait orders.

AYERS, J. G., Surgeon. Detached from U. S. S. "Wabash," and to Navy Yard, Portsmouth, N. H.

CORDEIRO, F. J. B., Passed Assistant-Surgeon. Ordered to the U. S. S. "Wabash."

NORTON, O. D., Passed Assistant-Surgeon. Ordered to the U. S. S. "Petrel."

MARSTELLER, E. H., Passed Assistant-Surgeon. Detached from U. S. S. "Petrel," and granted leave.

HALL, JNO. H., Surgeon. Ordered to appear before Retiring Board.

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The Times and Register.

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NEW YORK AND PHILADELPHIA, OCTOBER 3, 1891.

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Clinical Lecture.

ASEPSIS AND ANTISEPSIS IN ABDOMINAL SURGERY.¹

By E. E. MONTGOMERY, M.D.,
PHILADELPHIA, PA.

GENTLEMEN.—In the beginning of the course I feel that I cannot improve the time more wisely than in presenting to you some of the principles upon which successful work in the department of abdominal surgery must depend. I thus early enter upon the consideration of this subject, so that in your future study, you may be the better able to act as intelligent critics of what is, and what is not, proper technique in the performance of surgical procedure,—an intelligence that will be of great value to you in determining the causes of fortunate and unfortunate results.

By asepsis is meant careful exclusion of every possible means by which the wound might become infected. By antisepsis is meant the rendering of infectious material inert by contact with chemical agents. Owing to the sensitive character of the tissues with which we have to deal in the abdominal cavity, you can readily appreciate the fact that the greater portion of our measures brought into relation with this cavity must necessarily be those denominated aseptic. Every chemical agent, to be effective in the destruction of infectious material, must be so irritating as to render dangerous its contact with so delicate and active an absorbent surface as is the peritoneal cavity. In preparation for an operation the body of the patient is thoroughly cleansed with soap and hot water, every attention being devoted to the pit of the umbilicus and the external genitalia. Where the patient

has been previously suffering from an inflammatory condition of the pelvis, which has led to the application of blisters, poultices, counter-irritants, and so forth; the surface should be carefully cleansed, in addition to the soap and hot water, with either ether or alcohol, taking care to remove all dead skin or other débris. It should then be washed with a solution of peroxide of hydrogen, and covered with a cloth wet with a solution of acid sublimate, 1-1,000, which remains until removed for the operation. The operator and his assistants, should thoroughly wash their hands with soap and hot water for several minutes, devoting special attention to the fingers and nails with the nail-brush. Their clothing should be such as has not been exposed to the retention of infectious material by contact with infectious patients; they should wear clean starched aprons, covering up all the clothing likely to come in contact with the patient. The arms should be bared to the elbow. After having cleansed the hands, they should again be subjected to disinfection, if by any inadvertence, they have had an opportunity to become soiled. The assistants should be so trained that they have constantly before them the fear of infection, and, in whatever emergency, would not touch any object that might lead to soiled hands. The instruments, it is understood, should be thoroughly cleaned every time after being used, should be kept wrapped in clean towels, and, when preparing for an operation, should be subjected for a short period of time to the influence of heat, either by boiling, steaming, or by dry heat at a high temperature; they should then be placed in trays and covered with hot water, which should be renewed from time to time during the operation. These trays, of suitable length, may be made of glass, porcelain, or porcelain-lined metal. The hard rubber and papier maché trays are not so suitable on account of the influence upon them of hot water. The trays named are not very convenient for transportation, owing to particles being broken from

¹Clinical Lecture delivered in the Medico-Chirurgical College, September 22, 1891.

them, roughening their surfaces and affording an opportunity for the retention of septic germs. A very acceptable tray is made by Mr. Lentz, of this city, of copper, plated with aluminum or nickel. A nest of these trays may be of such a size as to permit their being placed in the bottom of an ordinary surgical bag.

SPONGES.

The greatest care should be exercised in the preparation and care of the sponges, as they afford an excellent opportunity for the introduction of septic material. Sponges of a suitable character should be first pounded, the sponge wrapped in a clean towel, until all the lime and sand are broken up and dusted out of them; they should then be placed in a solution of muriatic acid, sufficiently strong to give a markedly acid taste; in this they should remain for twelve hours, when they should be washed frequently in water until the acid is thoroughly washed out; they may then be placed in a solution of hyposulphite of soda to which muriatic acid has been added. This causes double decomposition in which sulphurous acid and sulphur are set free; the organic material of the sponge is burned out and the sponges are bleached. After washing out all this solution, wash a number of times until the water is free from sulphur, then place in a 5 per cent. solution of carbolic acid until wanted for use. In performing the operation a definite number of sponges are placed in a basin and given into the hands of the nurse or other assistant, to be handed to the operator or his assistant as they may need them. This nurse should have two basins, in one of which the sponge is washed out and placed in the other in clean water. When the operation is completed the nurse should be asked the number of sponges, in this way determining whether any have been permitted to remain in the cavity. No one but the one individual should have charge of the sponges, so that there is no opportunity for any mistake as to their number. After an operation the sponges may be cleansed and used again; indeed, after ordinary aseptic operations, the sponges which have been used are equally as good, if not better, than new ones. Where the wound has been of a markedly septic character and the cavity contained pus, the sponges should not be again used in an abdominal operation, and where the condition is a very virulent one of peritonitis, it is better that the sponges should be destroyed. In recleansing sponges they are first washed out in water, in order to get as much of the blood out of them as possible, then washed with green soap, and rinsed in several waters; or the use of the muriatic acid or hyposulphite of soda be substituted.

SUTURES AND LIGATURES.

The material used for sutures and ligatures is usually either silk or animal ligature. Silver wire is now rarely used for either purpose. By some, the silk-worm gut is used for sutures. For some time I have been very averse to introducing anything into the abdominal cavity and closing it up that is not readily absorbable. I have frequently seen the silk ligature remain in the abdominal cavity unnoticed for a number of months, or even years, and then, by its subsequent irritation and pressure upon the nerves within its grasp, give rise to great discomfort to the patient. In other cases, where the wound has been an aseptic one the ligatures may become infected and be a source of irritation, and the formation of a sinus. So long as the suture remains in place the sinus will con-

tinue, in some cases for months, and is only cured when the infected suture has made its exit. The catgut suture is absorbed and the patient experiences no further inconvenience from its presence. In the use of the catgut, however, I would reprehend the use of that usually found in the shops, as it is likely to become infected, and be a source of danger to the patient. A method of preparing the catgut is to take a suitable size, say the "C" and "D" string for sutures, and the "E" and "F" for ligation of the pedicle. These are prepared by placing the catgut in ether for from forty-eight to seventy-two hours, by which the fatty and extraneous material is dissolved out, they are then placed (when it is desirable to harden) in a five per cent. solution of carbolic acid, in which one grain of bichromate of potash is dissolved. The ligature remains in this for from forty eight to seventy-two hours, according to the size of the gut. It is then removed, washed in distilled water, and placed in alcohol until used. Every precaution must be observed in taking the catgut from the bottles that it does not become infected by unclean hands, by coming in contact with unclean trays, or by being dragged over blankets or other material before it is inserted in its proper place. Where silk is used, it, too, should undergo proper disinfection. This may be accomplished either by boiling the silk for an hour, or by placing it in a solution of 1-1,000 acid sublimate for from twenty-four to forty-eight hours, and then keeping it in alcohol until used. These matters seem to be of minute detail, and yet I can assure you that it is just the attention to questions of this kind that make the great or little surgeon. I have seen men make the most careful preparation of the room, of the furniture in it, of the patient, and then introduce into the cavity of the abdomen silk that had been procured directly from the store, without any preparation, or, that had been taken from a case and placed upon non-sterilized objects, such as a syringe case, or a dirty table in the room. Such a plan of procedure destroys all the benefit that would be derived from the other exceedingly thorough precautions. Better would it have been to have operated in an unclean room, than to have introduced ligatures and sutures of such a character.

For the operation, the patient should be placed on a suitable table, upon an ovariectomy pad, the abdomen bared, the body above and below the seat of the opening covered with blankets, and these covered either with towels wrung out of an antiseptic solution, or with towels that have been previously washed in such, and dried. Where the patient is at all depressed, it is better that the dry towels should be used, as they have a less depressing effect. They should cover the patient so that instruments, sponges, and suture material may be placed upon them without coming in contact with any infected surface. The wound in the abdominal walls is rapidly made, and bleeding vessels secured before the peritoneum is opened. Where the pelvis contains pus it is desirable that the intestines should be pushed upward, covered with flat sponges and held out of place during the time that the pus sacs are being enucleated. Should the sac rupture, its contents should be removed as quickly as possible without bringing them in contact with any more of the peritoneal surface than can be avoided. Care is exercised in introducing the ligatures that these shall not come in contact with any portion of the clothing covering the patient. It is better that the animal ligature should be covered with alcohol, as this keeps it from swelling up, and renders it more easily used in tying. The cavity of the abdomen may be irrigated

or not, according to the condition that has existed; if it has been soiled with pus it is desirable that irrigation should be done, while if it has simply been soiled by the amount of blood discharged from the wound, irrigation is unnecessary and is better omitted. Where irrigation is done the use of the chloride of sodium is preferable, as it is less irritating to the peritoneal cavity and causes less swelling of the peritoneum than the use of plain water. It is unnecessary to insist upon the thorough drying of the cavity from the fluid which has been thrown into it, for the peritoneal surface is a rapid absorbing one, and the fluid is readily taken up. Before introducing the sutures to close the wound, a sponge should be placed over the intestines, beneath the wounded surface, to absorb any blood that may result from the introduction of the needles for carrying the sutures. Before closing the wound we should consider the subject of drainage. When should it be practised and when omitted? It has been expressed by some in the following manner: "When in doubt, drain;" some, indeed, would drain in every case. It must be remembered that the peritoneum is a very extensive absorbing surface, unless it has undergone injury, as in the case where extensive adhesions have been torn up. It is capable of absorbing large quantities of fluid; indeed, it has been estimated that within twenty-four hours the peritoneum would absorb a quantity of fluid equal in weight almost to that of the body, consequently, in cases in which the injury to the peritoneum has been a simple one, the use of drainage is unnecessary, indeed, is only an increased opportunity for the entrance of septic material to delay the progress of the convalescence. In cases, however, in which marked denudation has taken place, in which the peritoneal cavity has been soiled with pus, or in which the operation has been prolonged, drainage is beneficial in affording vent for the serum that is exuded, and in affording us an opportunity to know the condition of affairs within the abdominal cavity. By its use hemorrhage is easily recognized and overcome before it produces a profound effect. The drainage tube consists of glass, usually carried down to the lower portion of the abdomen behind the uterus. Its apex is covered with a piece of rubber sheet or dam, by which the dressing may be preserved from contact with secretions. The tube should be emptied of fluid every one half to one hour, according to the amount of exudation that takes place. The nurse should be very careful in emptying this tube to avoid the contact of the rubber tube of the syringe with the clothing of the patient, or with anything that may be a source of infection. The syringe, itself, should be thoroughly scalded out, and it, with the rubber tube, should be kept in a solution of acid sublimate during the intervals of emptying. As soon as the secretion becomes clean, and but a small quantity of it, the tube should be removed. The wound may be dressed with iodoform or iodoform gauze, but preferably, we think, with a piece of protective over the wound, then dusted with boracic acid, and covered with salicylated cotton, held in place by strips of plaster and a bandage. Before applying the dressing, the wound should be carefully washed with an acid sublimate solution. The dressing is permitted to remain for a week or ten days, when it should be removed, the wound carefully washed with a solution of peroxide of hydrogen, and the sutures removed. This matter of removal of the sutures is as important as is their introduction, in its antiseptic details, as we not unfrequently find that the patient is infected in the tract of the suture during its removal, and when a wound has been entirely free from

suppuration during the progress of convalescence, it develops after the removal of the sutures.

From what I have said you will appreciate the fact, that success in the practice of surgery is obtained, as in every other department of life, at the price of eternal vigilance.

Original Article.

ON GENERAL FURUNCULOUS INFLAMMATION, AND FURUNCLE OF THE AUDITORY CANAL.—A NEW METHOD OF TREATMENT.

By LAURENCE TURNBULL, M.D., Ph. G.,

Aural Surgeon to Jefferson Medical College Hospital, etc., Philadelphia, Pennsylvania.

THE general furunculous inflammation has its origin in malaria, impure and damp air, defective sewerage, gout, rheumatism, neuralgia, and contagion from microbes: This latter is best noticed in the recurrent furuncles of the auditory canal. For a time I doubted this infection; but now I am fully convinced of the truth of the theory of M. Pasteur, and the careful and conscientious experiment of Dr. Lowenberg, who has artificially cultivated the micrococci of furunculi in the pus from the ears of several persons. This form differs very much from the ordinary abscess or boil, which is not apt to recur.

First, of general furunculous inflammations—these prevail mostly during the autumn and spring, and at times assume almost the character of an epidemic. A very large per cent. of the cases occur in adults. It is well-known that in damp seasons, with heat or extreme cold, persons become debilitated, and are more susceptible. In diabetes Dr. Lowenberg points out that we have a temperature favorable to the development of these organisms.

Our old method of treatment was the calcium sulphide, given in doses 1-20 to 1-10 of a grain, every two or three hours, with the addition of tincture of aconite to relieve pain. This method of treatment was found at times to modify the inflammation, and in some rare cases either to produce resolution, or, on the other hand, to hasten the suppuration. Incisions then followed into the elevated tender spot, being preceded by the application of moist heat or hot water. Dr. Lowenberg, immediately after cutting the furuncle, employs a solution in alcohol of boracic acid, or fine powder blown upon the part, after freeing it from blood or pus.

THE DIFFERENT FORMS OR CAUSES OF THIS MALARIAL DISEASE.

The impure air from defective sewerage has been shown, by the late Dr. Cassells, of Glasgow, to be a prolific cause of this and other acute affections of the middle ear. He has given us, in a paper, a large number of severe and protracted cases, penetrating even to the membrana tympani with perforation, ultimately relieved only by sending these patients to a pure, dry, and high altitude.

THE GOUTY FORM OF FURUNCLE.

It has been doubted by some if there is such a condition of the ear as gouty otitis; but this has been proved by my own observation, and those of Debout D'Estrées, in the *Medical Press*, July 11. 1888, as follows:

"Although better known than gouty parotitis, of which I published the first recorded case in 1885, gouty otitis is nevertheless one of the rarest manifestations of gout. Nothing, indeed, is commoner than tophi in the external ear; but nothing is rarer than gouty affections of the middle and internal ear. Dr. Garrod, however, claims to have met with a certain number of cases of concretions on the membrana tympani and the ossiculi; but he adds, it is true, that he had repeatedly examined these concretions, the existence of which had been insisted upon more particularly by Drs. Toynbee and Harvey (*a*) without having been able to detect the slightest trace of uric acid. It is impossible, therefore, at present, to affirm that the concretions in question are, in reality, the products of gouty inflammatory changes. Lécorché, in the chapter of this work devoted to gout in the various organs of the body, quotes the same authors without mentioning any personal experience in regard thereto.

"The following case is extremely interesting from several points of view. The patient, M. Antoine, of Metz, member of the German Parliament (who has authorized me to publish his case), had suffered a great deal of trouble due to political reasons. He is a strong, robust man, forty-two years of age. His parents are still living, and having never shown any sign of gouty diathesis, could hardly have transmitted the gravel and the gout to which he is now a victim. His digestive apparatus is in good order, and he leads an active and sober life, so that one would have thought him secure from the uric acid diathesis; but, as a matter of fact, he comes within the category of cases, of which thirty-five out of a thousand cases of gravel, brought by me before the Academy of Medicine in 1876, were due exclusively to the disastrous effects of violent emotion.

"Harassed in every way, imprisoned, and finally expelled from his native town, M. Antoine suffered severely in health, and became subject, first, to gravel, of which he had several attacks, and then to nephritic colic while in prison.

"In June last, I received a letter from my patient, dated from Luxemburg, in which he informed me that he had been suffering from extreme pain consequent on inflammation of the internal ear, the cause of which was obscure, for there was no suppuration at the neuralgic points at the cranium. The ear trouble was accompanied by visual derangements, which had persisted. I advised him to come to Contrexéville at once, especially as he was then suffering from an attack of gravel. Having examined him with the greatest care, I was enabled by a process of elimination to attribute the aural affection to the uric acid diathesis.

"I explained the reasons for my diagnosis to the patient, and quoted the case of parotitis in which the patient, after experiencing gouty manifestations successively in the right parotid gland, the left knee, the left parotid gland, and finally the right knee, was left with a single symptom, viz., a salt taste in the mouth. This salt taste, which could be produced by compression of the parotids, was due to the saliva, which proved to be laden with urates, and gave the murexide test.

"The patient at once exclaimed that he, too, had this salt taste in the mouth; but, curiously enough, it was limited to the affected side. I was very anxious to examine his saliva when the taste was noticed; but, unfortunately, circumstances rendered this impracticable. Nevertheless, the relief which followed the treatment, and the disappearance of the aural and visual troubles, authorize the belief that the lesions were due to gout, and that the latter was due to the effect of violent emotions."

Several cases have come under my own observation. One of these I visited in consultation with Dr. Shillito, in London, England, in which there was deafness from the deposit of gouty concretions in the membrana tympani, which deafness was removed by the opening of the Eustachian tubes and use of alkaline remedies as lithia, etc., and iodide of potassium.

A more recent case occurred in the neighborhood of Newport, this last summer. A lady, of apparently perfect health, was attacked with the foregoing gouty affection of the ear, which was most clearly manifested by the peculiar irritability of the meatus, attended with a slight serous or sticky discharge, with itching and pricking pain. The walls being somewhat swollen, with a tendency to deep redness, with swollen follicles. The patient informed me that it commenced with itching and fullness, pain intensely severe, and aggravated by any movement of the jaw;

the immediate parts being exceedingly tender. She had some fever at first, but this had subsided, and had been freely blistered, and had taken calcium sulphide and aconite, etc., by the advice of her physician. Still the trouble continued, and her attending surgeon, who had been called in, after treating her for some time, thought it advisable to have a consultation, as he was afraid of serious mischief to the ear. The surgeon's anatomical knowledge would naturally lead him to know that the auditory canal, by virtue of its close connection with the mastoid cells and lateral sinus, always carries with it the possibility of serious danger.

In the inner part of the canal its lining membrane is also the periosteum of the bone. It is well known that an inflammation beginning in the meatus may spread to the membrana tympani, and in rare cases perforation takes place, and in this way it may be propagated to the brain. I therefore advised the cleansing of the ear with a solution of boracic acid in cologne water; to paint it with a solution of bichloride of mercury, 1-2,000 of a grain, to destroy all microbes; also, to keep the parts anointed with a preparation of yellow oxide of mercury with vaseline, but above all, the internal administration of the liquor potassii, "United States Pharmacopœia," which has been found to produce the most valuable results in the treatment of all forms of boils. The dose was 10 drops in a tablespoonful of orange water and mucilage, taken after meals, in water. For the neuralgia pain, which took place at night, 2-grain pills of the muriate of quinine, until four were taken. To relieve the noises, bromide of potassium in an elixir of cascara. Great care in her diet; to avoid sweet wines, etc. In some ten days the ear was well. It attacked the second one, as I feared; this was owing to a previous want of care, or from the constitutional dyscrasia. The same treatment was followed out with entire success.

SEPTEMBER, 1891, 1502 WALNUT ST.

Society Notes.

A COLLECTIVE INVESTIGATION BY THE THERAPEUTIC SECTION OF THE PHILADELPHIA POLYCLINIC MEDICAL SOCIETY.

SWEET-OIL IN THE TREATMENT OF GALL-STONES,

WAS the subject of a paper read September 9, 1891, by THOMAS J. MAYS, M.D. The subject of the action of sweet-oil in the treatment of biliary colic and catarrh of the hepatic passages has recently been warmly discussed. There are many who regard this agent as being very much overrated, while many others believe that it has a very beneficial influence on this disease. In view of the divided opinions on, and the importance of, this matter, the Therapeutic Section of the Philadelphia Polyclinic Medical Society has, as a part of its scientific work, undertaken a special collective investigation concerning the clinical value of this drug in gall-stone colic. With this end in view, the undersigned committee was appointed, and directed to send a number of circulars to the members of the profession, of which the following is a copy:

"Sex and age of patient? Seat of pain? Jaundice? Previous attacks? Did you test any other remedy, and with what results? Result of treatment with olive-oil. Remarks."

To these circulars nineteen replies were received, and thirty-seven cases of gall-stone colic treated with olive-oil were reported. To these members of the profession the warmest thanks of this committee are due for the promptitude with which they responded. Additionally the committee imposed the task upon

itself to collect as far as possible all the previously reported cases of biliary colic which were treated according to this method, and succeeded in gathering records of seventeen cases, making altogether a list of fifty-four cases, a condensed history of which is presented in the following table:

TABLE OF CASES.

No.	Sex and age.	Seat of pain.	Jaundice.	Previous attacks.	Use of other remedies, and results obtained.	Results obtained from the use of sweet-oil.	Remarks.	Name and address of observer.
1	F. 40	Right hypochondrium.	Yes.	Three or four.	None.	Six ounces taken in three hours. Relief in twenty-four hours.	No recurrence for more than three years, up to time of report.	H. T. Bahnson, Salem, N. C.
2	M. 50	Right hypochondrium.	Yes.	A great many.	Antipyrine hypodermically, with temporary relief.	One pint taken in two hours; complete relief.	No return for more than two years.	H. T. Bahnson, Salem, N. C.
3	F. 65	Right hypochondrium.	Yes.	Five or six.	None.	Half a pint taken in four hours; relief in 12 hours.	No return for more than three years. In two other cases the single large dose produced relief, but failed to prevent a recurrence of attacks.	H. T. Bahnson, Salem, N. C.
4	M. 46	Right hypochondrium.	Yes.	Three.	Chelidonium and dioscorea gave some relief	Quantity of oil given not stated. Remained well so long as he took it.	Used it in other cases of biliary troubles, and with good success.	G. R. Fortiner, Camden, N. J.
5	M. 34	Right hypochondrium.	Yes.	No.	Chelidonium without relief.	Quantity of oil given not stated. Administered it for ten days, when patient died.	<i>Post-mortem</i> investigation showed complete adhesive obstruction of bile ducts. Patient received a blow in hepatic region some time before.	G. R. Fortiner, Camden, N. J.
6	F. 28	Gastric region.	Yes.	Eight or ten.	Sodium phosphate without benefit.	One pint at a single dose. Complete relief.	No recurrence within a year.	J. J. Cox, High Point, N. C.
7	F. 49	Epigastrium.	Yes.	Six.	Sodium phosphate with some benefit.	Took the oil for four weeks. Dose not stated.	No recurrence; general condition much improved.	G. H. Franklin, Hightstown, N. J.
8	M. 67	Epigastrium.	Yes.	Twelve.	Sodium phosphate, after which a severe attack became less frequent.	Continued oil for six weeks. Dose not given.	No recurrence; improvement after oil surprising.	G. H. Franklin, Hightstown, N. J.
9	M. 45	Right hypochondrium.	No.	One a week for three months.	None.	Took the oil for four weeks. Dose not given.	One light attack since he began the oil.	G. H. Franklin, Hightstown, N. J.
10	M. 31	Right hypochondrium.	Yes.	Once every 3 weeks during 14 years.	Morphine and anæsthetics; temporary abatement.	Dose of oil not stated. Free from attacks for eleven months.	Her previous sufferings were intense, requiring large doses of narcotics.	A. B. Gloniger, Lebanon, Pa.
11	F. 35	Right hypochondrium.	Yes.	Uncertain.	None.	Dessertspoonful of oil every three hours. Relieved after second dose.	History of malaria; liver and spleen enlarged.	E. Lawney, Denver, Col.
12	M. 10	Right hypochondrium.	Yes.	One 5 years before.	None.	Dessertspoonful of oil. Pain relieved at once.	Also gave ammon. chloride, grain iij, and calomel $\frac{3}{4}$ grain t. i. d.	E. Lawney, Denver, Col.
13	F. 51	Hepatic and gastric region.	Yes.	No.	Yes; nature of same not mentioned.	Daily for two days 8 ounces of oil; no relief.	Patient died.	E. P. Bernardy, Philadelphia.
14	F. 72	Region of gall-bladder.	Yes.	No.	Yes; nature of same not mentioned; no benefit.	Nine ounces of oil for ten days without positive improvement.	Oil caused numerous alvine discharges, lightened the color of skin, and seemed to reduce size of gall-bladder.	E. P. Bernardy, Philadelphia.
15	M. 40	Right hypochondrium.	Yes.	Several, but none for 5 years.	Dioscorea, morphine, and atropine, with some relief.	Dessertspoonful every half hour with the most marked relief.	Regulated diet, and gave sodium phosphate, etc.	Theo. G. Davis, Bridgeton, N. J.

No.	Sex and age.	Seat of pain.	Jaundice.	Previous attacks.	Use of other remedies, and results obtained.	Results obtained from the use of sweet-oil.	Remarks.	Name and address of observer.
16	F. 30	Over abdomen.	Yes.	One, possibly two.	Calomel, sod. bi-carb. and morphine, slight relief.	Dessertspoonful of oil every three hours; complete relief after second dose.	Stools contained concretions.	E. H. Bidwell, Vineland, N. J.
17	F. 55	Right hypogastrium.	Yes.	Yes.	Morphine and atropine hypodermically, with what results not stated.	Gave six ounces of oil, and relief came in an hour. Following day slight attack; ten ounces. No recurrence.	The intense vomiting from which she suffered ceased after the oil was taken.	Ch. Pottberg, Philadelphia.
18	M. 40	Right hypochondrium.	Yes.	Several.	Silver nitrate, regulation of diet and water with good results.	Dose of oil not stated. Negative results.	Examination of feces after oil showed contents of soapy concretions.	J. Daland.
19	M. 50	Right side of abdomen.	Yes.	At least two.	Chloroform inhalation and sodium bromide; did not obtain decided relief until oil was taken.	Relieved after taking three doses (size not stated) of oil.	The oil appeared to relieve him, but he may also have been helped by the chloroform.	.....
20	M. 46	Over gall-bladder on pressure.	Yes.	Two.	Not stated.	Ten hours after taking one quart of oil in divided doses, two large gall-stones discharged in the stools. Steady improvement.	Bowels had not been moved for four days before the oil was taken. Singultus existed for twelve hours before bowels moved.	A. F. Magruder, U. S. N., Wash., D. C.
21	M. 52	Over gall-bladder.	Yes.	For years at intervals of from 4 to 6 months.	Nature of not stated; temporary relief.	Half-ounce doses of oil every five hours for about a month before report was made.	Too early to judge the effects of oil. General health better than for two months.	J. D. Dewitt.
22	F. 40	Right hypochondrium.	Yes.	One about 2 months before.	Morphine, quinine, atropine, calomel, etc. Not the prompt relief obtained with the oil.	Dessertspoonful of oil every four hours. Improvement at once.	No recurrence so far as known. Gall-bladder diminished in size.	Thos. J. Mays, Philadelphia.
23	F. 45	Right hypochondrium.	Yes.	Periodically for a number of years.	Morphine and atropine hypodermically gave slight temporary relief.	Dessertspoonful of oil every three hours, with decided relief.	No attack since so far as known.	Thos. J. Mays, Philadelphia.
24	M. 20	Not known.	Yes.	During previous 3 months.	No.	Dessertspoonful of oil three times a day with prompt relief.	No return so far as can be learned.	Thos. J. Mays, Philadelphia.
25	M. 27	Right hypochondrium.	Yes.	Periodical during previous year.	Not by observer.	Dessertspoonful of oil four times a day with gradual relief.	No recurrence.	Thos. J. Mays, Philadelphia.
26	M. 67	Right hypochondrium.	No.	No.	None used.	Dose of oil not given. Complete relief.	Hard concretions like gall-stones passed freely for ten days after taking the oil.	C. R. Early, Ridgway, Pa.
7	F. 35	Right hypochondrium.	Yes.	Very frequent.	Morphine, mercury, and potassium iodide; good results.	Dose of oil not stated. Good results.	Perfectly well in three or four weeks after taking the oil.	C. R. Early, Ridgway, Pa.
28	M. 23	Right hypochondrium.	Yes.	Yes.	Potassium chlorate, sodium bicarbonate, and ipecac.; good results.	Dose of oil not stated. Cured in two weeks.	No recurrence for three years.	C. R. Early, Ridgway, Pa.
29	F. 50	Right hypochondrium.	Yes.	Yes.	None by observer, but by other physicians.	Dose of oil not stated. Found relief in two days.	No recurrence; treated forty years ago. Treated many similar cases during this time.	C. R. Early, Ridgway, Pa.
30	F. 54	Right hypochondrium.	Yes.	Quite a number.	Of everything else he tested chloroform seemed to give the best results; relief temporary.	Six ounces of oil in two equally divided doses, half an hour apart. Gave oil at three different times. No symptoms for two years.	Passed a large number of calculi. Enforces a rigid dietary in all these cases. Allows no sugar, starchy or fatty food.	D. P. Boyer, Philadelphia.
31	M. 60	Right hypochondrium.	Yes.	A number during 3 previous years.	Sodium phosphate, chloroform, morphine, and succinic acid; no satisfactory result.	Same dose as in previous case. Relieved two attacks two months apart.	No recurrence since second attack, which occurred a year and a half ago.	D. P. Boyer, Philadelphia.

No.	Sex and age.	Seat of pain.	Jaundice.	Previous attacks.	Use of other remedies, and results obtained.	Results obtained from the use of sweet-oil.	Remarks.	Name and Address of observer.
32	F. 22	Right hypochondrium.	Yes.	Two.	Sodium phosphate, morphine, mineral water, etc., seemed to relieve first, but not second attacks.	Only received the oil for two days, when she was entirely relieved. Passed a number of calculi.	Treated about ten cases with the oil, and in all there was either a cure or benefit.	D. P. Boyer, Philadelphia.
33	M. 42	Right hypochondrium and in epigastrium.	Yes.	None.	Tested numerous cholagogues without benefit.	Six ounces of oil at night, followed next morning with laxative. Relief.	Discharge of biliary calculi. No recurrence.	Ed. R. Mayer, Wilkesbarre, Pa.
34	F. 40	Right hypochondrium.	Yes.	About two a year for 15 years.	Not by observer.	Six ounces of the oil gave prompt relief. This was the last attack the patient had.	Insists on a rigid dietary. Cholagogues, Carlsbad water, etc., as preventatives.	Ed. R. Mayer, Wilkesbarre, Pa.
35	M. 58	Right hypochondrium and right shoulder.	Yes.	No.	Not by observer.	Same dose of oil in the evening and purgative in the morning. Complete relief after fourth dose. No recurrence.	Gall-bladder was so distended with calculi that it could easily be mapped out. Treated about 35 cases of gall-stones during last 14 years with olive oil, and in every instance the severity of the attack was mitigated by the first and entirely relieved by third or fourth dose.	Ed. R. Mayer, Wilkesbarre, Pa.
36	F. 42	Right hypochondrium and back.	Yes.	Suffered for 10 years off and on.	Sodium phosphate, gave temporary but no permanent relief like the oil.	Tablespoonful of oil every three hours for about one month; after an interval gave it again, but less frequently. Pain ceased at once after oil was administered.	No recurrence; passed a calculous in feces weighing 40 grains.	J. S. Baer, Camden, N. J.
37	M. 68	Epigastrium and right hypochondrium.	Yes.	Two.	Opium and ether only gave temporary relief.	Dessertspoonful doses of the oil gave prompt and decided relief.	No recurrence.	H. C. Bloom, Philadelphia.
38	F. 42	Region of gall-bladder.	Yes.	Yes.	Morphine hypodermically and by the mouth; ether inhalation and hot poultices, without relief.	Half an hour after swallowing from half to three fourths of a pint of oil the pain ceased abruptly.	First three passages after oil contained two gall-stones; has had two slight attacks since which did not require medical interference.	D. D. Stewart, Med. News, Nov. 23, 1889.
39	F. 45	Right hypochondrium.	Yes.	Yes, for 12 years.	Morphine and atropine hypodermically; hot water, etc.; relief for two hours, when pain returned as severely as before; morphine gave no relief.	Forty-five minutes after being able to retain five ounces of cotton-seed oil, pain diminished, and ceased three hours later.	Subsequent attack also relieved by the oil. Fifth day after last attack passed a calculus as large as a beech-nut.	D. D. Stewart, Med. News, Nov. 23, 1889.
40	M. elderly.	.....	Yes.	For some years.	Usual remedies, without relief.	Six ounces of oil at bedtime, followed by castor-oil next morning. Passage of gall-stones. Relief.	In two days another paroxysm of pain was threatened. Ordered oil two following nights. Saw her four months after. No recurrence.	R. Kennedy, Kingston, Can. Lancet, 1890, vol. ii., p. 456.
41	F. adult.	.....	..	For years.	Not stated.	Full doses of oil for two consecutive days. No return.	Passed a large number of calculi. Relieved two other cases of gall-stone colic with the oil.	R. Kennedy, Kingston, Can. Lancet, 1890, vol. ii., p. 456.
42	F. 40	.....	..	Yes.	Treated by other physicians without relief.	Eight ounces of oil at bedtime, and following morning, after last a dose of castor-oil. Relief.	Evacuated several small gall-stones.	Dr. Gay, Buffalo, Buff. Med. and Surg. Journ., vol. vi., p. 214. 1866-67.

No.	Sex and age.	Seat of pain.	Jaundice.	Previous attacks.	Use of other remedies, and results obtained.	Results obtained from the use of sweet-oil.	Remarks.	Name and address of observer.
43	M. adult.	.....	.	Third attack.	Morphine hypodermically to allay pain.	Eight ounces of oil night and morning, followed by a dose of podophyllin. Relief.	Says that olive-oil is as much a specific in gall-stone colic, as sulphur is in scabies.	Dr. Gay, Buffalo, Buff. Med. and Surg. Journ., vol. vi., p. 214, 1866-67.
44	F. adult.	Pain in epigastrium.	Yes.	Yes.	Was treated for scirrhus of the liver by other physicians. Received 60 drops of McMunn's elixir of opium with only temporary benefit.	Eight ounces of oil for two consecutive nights. Evacuated calculi. Relief.	Success in this case led him to use it in another which is not fully described.	Ira Hatch, Chicago, Ill., Chicago Med. Examiner, 1867, vol. viii., p. 469.
45	.. adult.	.....	..	At least one attack before.	One-eighth gr. doses of calomel; bowels moved; no relief; patient vomited everything. Obtained no relief from other treatment.	Two pints of oil in divided doses. Relief. The oil was the only thing which would remain in stomach.	An operation had been suggested, but with the improvement it was abandoned.	F.W. Langdon, Cin. Lancet, 1890, p. 191.
46	F. 36	Liver enlarged and sensitive; gall-bladder enlarged.	..	Almost daily for 5 years.		Large doses of oil for two weeks. Relief.	Free from attacks for 18 months, up to the time report is made. Passed hard concretions.	S. Rosenberg, Therapeut. Monatshefte Dec., 1889, vol. iii.
47	F. 37	In hepatic region; enlarged liver.	Yes.	At least for 5 months, attacks occurred during menstrual periods.	Cathartics and other agents brought no relief.	Twenty-four hours after the first large dose of oil pain disappeared, and in a few days the liver diminished in size.	About two months after this attack there was a slight return checked with one dose. No recurrence and a general improvement.	S. Rosenberg, Ibid.
48	F. 38	.....	..	For 9 years; latterly once a week.	Mineral-water cure without benefit.	Large doses of oil relieved her, excepting a slight soreness in region of liver which was cured with 15 grs. sodium salicylate three times a day.	Passed a biliary calculus. Free from pain to time of the report—about one year.	S. Rosenberg, Ibid.
49	F. 48	In region of gall-bladder.	Yes.	Several attacks.	.....	Large doses of oil followed by two passages and relief within twenty-four hours.	Passed large number of concretions. The attack occurred with each menstrual period for some time before she took the oil.	MM. Chauffard et Dupré, Société Médicale des Hôp. de Paris, tom. v., 1888.
50	F. 62	.....	Yes.	For 12 years.	.....	Large dose relieved her for eight days, but the final results are of a doubtful character.	.....	MM. Chauffard et Dupré, Ibid.
51	F. 50	.....	Yes.	For a number of years.	.....	Large doses of oil were followed by local and general improvement.	.....	MM. Chauffard et Dupré, Ibid.
52	F. 45	In hepatic region.	Yes.	At least three attacks.	.....	Large doses of oil followed by beneficial results.	The pain in the hepatic region disappeared, and the colic was cured.	MM. Chauffard et Dupré, Ibid.
53	F. 58	In hepatic region.	Yes.	A number of attacks.	.....	Large doses of oil followed by relief.	Passed a large number of concretions. Pain and swelling in liver disappeared.	MM. Chauffard et Dupré, Ibid.
54	F. 43	In hepatic region.	Yes.	Six attacks.	.....	Large doses of oil followed by relief.	The attacks of biliary colic were associated with nephritic colic, and with the discharge of a urinary calculus, biliary calculi passed at the same time.	MM. Chauffard et Dupré, Ibid.

An analysis of these fifty-four cases shows that there were about one-third more females than males who suffered from gall-stone colic; that two died; that in three negative results were obtained, and that in fifty, or in 98 per cent., positive relief was afforded. These results make a better showing still, when we consider that one of those who died was suffering from adhesive obstruction of the bile ducts—a disease which no procedure, either medical or surgical, could have remedied. Nor do these figures give us a true estimate of the favorable action of olive-oil in this disease; for two of the observers state that they have treated forty other cases of biliary colic without a failure, but of which they had kept no record—making in all a collective return of eighty-nine cases—showing the great value of this drug.

These cases illustrate, then, the positive efficaciousness of sweet-oil in the treatment of gall-stone colic, and the question naturally arises, therefore, as to the manner in which this agent acts. Dr. Rosenberg's experiments ("Ueber die Anwendung des Olivenöls bei der Behandlung der Gallensteinkrankheit." *Therapeutische Monatshefte*, December, 1889, S. 542) demonstrate beyond a doubt that it largely increases the quantity of bile secreted, while at the same time it diminishes its consistency. But how does it accomplish this? Does it stimulate the biliary channels by coming in contact with their openings into the alimentary canal? Or is it decomposed into fatty acids and glycerine through the instrumentality of the pancreatic juice, and does the "glycerine so liberated exert in the duodenum an action similar to that which takes place when it is introduced into the rectum," causing a powerful reflex peristalsis—an ingenious theory suggested by Dr. D. D. Stewart?¹ Or does it act in accordance with the hypothesis formulated by Virchow, who shows from his own experiments (*Therapeutische Monatshefte*, 1890, S. 86) that it is absorbed from the alimentary canal, is excreted by the liver, and is thrown into the bowels again through the biliary passages? The last of these theories appears to be most rational, because it explains certain well-known features in its action, and also places it on a level with the action of other cholagogues. We may conceive, then, that the beneficial influence of oil consists not so much in dissolving the biliary concretions, as it does in increasing the biliary excretion, in flushing, and in lubricating and washing out the passages of the liver.

Another point of interest in this collection is as to the proper dose of the oil. Are the large doses necessary which were administered to most of the cases in this collection? It appears not, for eight of the cases (Nos. 11, 12, 15, 16, 22, 23, 24, and 25) received only dessertspoonful doses every three or four hours, and apparently with the same prompt and positive relief as that which was afforded by doses of from five ounces to one and two pints. If this should be confirmed by further experience, it would be a great practical gain, in view of the fact that a great many persons show a strong aversion to all kinds of oil, especially if they are to be taken in large quantities.

Furthermore, according to the observation of Dr. Stewart (Case 37), it does not appear to make any difference whether olive or cotton-seed oil is used. Indeed, it is well known that much of the oil which is sold as olive is, in reality, refined cotton seed oil; and Dr. Stewart's observation tends to show that in

all probability any bland oil will have the same effect on the disease under consideration.

In conclusion, the committee desires to congratulate the Polyclinic Medical Society on the selection of a subject for collective investigation which has proven so fruitful of practical results as that which is embodied in this report; and expresses the hope that it may continue its good work of testing therapeutic agents in a clinical way. It is true that animal experimentation often points out the path in which the usefulness of a drug lies, but clinical and collective research, is after all, the crucial and final test of all true therapeutic progress.

THOMAS J. MAYS, M.D.,

HOMER C. BLOOM, M.D.,

Committee.

DISCUSSION.

DR. WILLIAM S. STEWART: I wish to show the Society a stone which was obtained this summer from a lady between seventy and eighty years of age. She had suffered with periodical attacks affecting the bowels and passing off with simple treatment. On the last occasion she suffered excruciating pain in the region of the cæcum, and I was sent for. Thinking there might be some inflammatory affection in this region, and that possibly abdominal section would be necessary, and finding a mass in the right iliac region, I placed her in the knee-chest position and gave her a very large injection. After as much as possible had been injected, I had her sit on a jar. Not experiencing relief, I continued the injections while she was in this position, using flax-seed tea. This was continued for five or ten minutes. She was then put to bed, and another large injection given. I then left her, and shortly afterward she got up and this huge gall-stone was passed. (About the size of a hen's egg.)

Some twenty-five years ago my attention was directed to the method of treatment by olive-oil by a lady from California. I had seen her some time before in a debilitated condition from frequent attacks of biliary colic. I inquired the cause of the improvement, and she told me that she went with a friend to see a quack, who at once told her that she had gall-stones, and directed her to take half a pint of sweet-oil in the evening, and to rub the right side frequently during the night, telling her that when her bowels were opened she would pass many gall-stones. It happened just as he said, and she had entire relief. Since then I have taken advantage of this hint.

I use the spirits of chloroform in combination with olive-oil during the period of attack, and recommend that the oil be continued in doses of two tablespoonfuls before each meal, for a period of several weeks afterward. In this connection I recall to mind an amusing occurrence that happened in the army. A soldier was suddenly taken with biliary colic, and the assistant surgeon, an ignorant man, who had been promoted from the position of hospital steward, was called. He at once prepared a dose of chloroform, and taking it to the patient, said: "Take this. It may do you good, or it may kill you. Try it."

DR. JOHN C. DA COSTA: My results with olive-oil have not been so brilliant nor so quick as those reported in the paper. Opiates and chloroform will relieve the pain, but phosphate of soda does not seem to act as well as reported. Calomel between the attacks acts well; corrosive sublimate still better. One case will illustrate what I have to say. A hysterical woman has had at least five or six attacks in two years. I was disposed to think that all the attacks

¹"A Suggestion as to the Action of Olive or Cotton-seed Oil in Gall-stone Colic." By Dr. D. D. Stewart. *Medical News*, November 23, 1889.

were not due to gall-stones until she brought me the stones which she had just passed. She was treated with olive-oil in half-pint doses. Since then she has had four or five attacks. In the last two she did not consult me until they were over. She takes half a pint to a pint of olive oil at one dose, and lies down. In twelve or fourteen hours (not two or three, as in some of the reported cases) she is relieved. The oil seems rather to lengthen the interval between the attacks.

DR. M. PRICE: The committee deserves great credit for its thorough investigation, but I cannot see the brilliant results referred to. In my experience I have not found the spasm of biliary colic to last many hours. How olive-oil can relieve the pain, unless it is by a lubricating process, I cannot understand. Many stones are of a soft, non-irritating nature, and if the spasm in the gall-duct is relieved, there is no trouble; the stone passes readily, except when the duct is inflamed. Within a month I have seen two post-mortems. In one, a man, there were found two hundred and fifty gall-stones in the bladder. The man had never had an attack. In the other, that of an old lady with cancer of the kidney and a stone in the kidney, the gall-bladder contained five or six ounces of grumous fluid and a number of soft gelatinous stones. She had never had any symptoms referable to the gall-bladder. There is another form of stone in which the treatment could be of no benefit, and that is, in those hard ones which we see in cancer, and which in many cases, I think, are the cause of cancer of the liver. Where the stone is large and produces constant irritation, there can be no possible benefit from any treatment except tremendous doses of morphine. The stones which I show you are hard, and were removed by section.

The history of the cases reported is of this character. You prescribe a remedy to which the patient submits and endures the pain until the spasmodic period of the disease passes. Chloroform and morphine during the continuance of the spasm seems to be the only rational treatment.

In this whole series of cases has there been a post-mortem? It is very difficult to say when you have a patient suffering with spasmodic pain in the region of the gall-bladder that it is due to gall-stones. Four or five years ago I saw a traveling minstrel who had had attack after attack, and had been treated by the best surgeons in the country for gall-stones. He had received olive-oil and many other methods of treatment. I said to him there was no use of doing anything until we found out what was in the gall-bladder. I operated, and after breaking up adhesions reached the gall-bladder and found it perfectly healthy. The patient was completely relieved. His symptoms had simulated gall-stones so much that many surgeons wanted to open him for gall-stones.

In regard to cases of obstruction of the gall-duct.¹ There are cases simulating gall-stones which are not relieved by medical treatment, but which could be relieved without trouble by abdominal section. It has been suggested by one of the best surgeons in this country to open the abdominal cavity and drain the gall-bladder, then to take a rubber ligature and unite the duodenum or ileum to the gall-bladder, and then with a whipped suture, unite the peritoneum of the bowel to the peritoneum of the gall-bladder. In the course of three or four days a fistula forms and then the abdominal opening can be closed with silk-worm

¹In the doctor's report of the case of stricture of the gall-duct with death, the post-mortem found no stone; in this case it was stricture, and not stone, under treatment.

sutures previously introduced. There is no question that gall stones of the size that I have shown should be removed. It is my firm belief that gall-stones of this hard, irritating nature may in time produce malignant disease of the gall-bladder or of the gall-duct.

I think, with Dr. Mays, that the explanation of the benefit of olive oil, if it exerts any, is to be found in the lubricating and stimulating qualities of the oil, and that it relieves spasms simply by its purgative effect. I cannot see where the benefit can come in. It has no solvent effect, and it cannot remove a stone whose diameter is ten times that of the gall-duct.

DR. JAMES B. WALKER: In my experience, the question is not so much what will relieve the attack, as what will prevent its recurrence. If one would send out a series of questions in regard to the usefulness of any particular agent in gall-stones, would he not receive replies very similar to those given to-night? Take calomel, or any other agent which acts as a laxative, and it will terminate an attack of gall-stones, if it is a terminable attack. The question is, What will prevent recurrence? So far as this report goes, it seems to give to olive-oil a favorable position as an agent for preventing recurrence. This is the most favorable report that I have seen. Still these are not exceptional results. We meet with cases of gall-stones where the attack is never repeated. Unquestionably, in many cases the recurrences are due to the number of gall-stones. Sometimes, however, the attack terminates without the discharge of the stone, and yet there is no recurrence for months. I have a patient who recently passed a calculus, resembling a mulberry both in shape and appearance; he passed this after a number of attacks under my observation. The attacks were treated with morphine and calomel, followed by phosphate of sodium and nitro-muriatic acid. After each attack there would be a return to health for a period. In at least ten attacks, the feces were examined without result. At times a detritus was found, looking like a crumbled stone. This was found in the last attack, and it was thought that the stone had crumbled and passed; however, the following day another severe attack occurred, in which blood was passed, and in the center of a clot of blood was found the calculus, as large as the last joint of the index finger, and without facets. This was, unquestionably the cause of all the trouble.

I believe that any laxative agent which will promote peristalsis and free biliary discharge will relieve the immediate attack if the stone can escape; then some agent to relieve the catarrh of the duodenum and the hepatic catarrh will be required. I have used olive-oil in several cases, but my experience has not been satisfactory. The case just referred to received six ounces of olive-oil on two occasions without benefit; other patients have received equal doses without success. The best remedy that I have found for old, recurring cases, where there seems to be an impacted stone, and where even cancer has been suspected, from the cachexia, is spirits of chloroform. In two cases, sisters, seen at intervals of five years, this seemed to be the agent that turned the tide of events after repeated efforts with other remedies. I gave it in teaspoonful doses three times a day. The cases immediately changed their character, the jaundice disappeared, and improvement in the general health took place. I believe the chloroform, which is known to increase the liquefaction of the bile, is of value in these cases; this, with phosphate of sodium, or some other sodium salt, or, where the patient is wealthy enough, a visit to the Carlsbad Springs. Here the waters are taken with a strict dietary for three weeks;

when the patient is emaciated to a certain degree, he is sent to some other place for recuperation, to return for three successive years. This will often effect a cure. I have a patient who has been benefited by this course. After her return from the first visit to Carlsbad she had three attacks during the year; after the second she had two, and her general health was excellent. She is now returning from her third visit.

Dr. Streets, of the navy, has mentioned to me an interesting case where he used olive oil. The patient, a sailor, was seized with an attack of gall-stones, and was at once put upon the use of olive-oil. The discharges were saved, and there were obtained a number of soft, pulpy bodies, which had a very odd appearance. They were somewhat globular, and not faceted. These were placed on a surface so that the oil could be absorbed, and they shrunk in size, showing them to be faceted gall-stones. It seemed as though the oil had penetrated these in some way, either before or after leaving the biliary duct. They were unquestionably gall-stones.

DR. A. B. HIRSH: There is possibly one class of cases in which exception might be taken to Dr. Price's remarks in regard to having a remedy that would obviate future attacks, that is, those cases of distortion of the anatomy of the parts where no operation would avail. In the majority of cases of cholecystotomy we allow for drainage for some time, in the hope that the habit of inspissation of bile may be overcome. Those cases in which peritonitis is associated with resulting obstructive bands, and where, after closure of the fistula the symptoms recur, are not satisfactory ones to deal with. I have met with several such cases, and in these any remedy that offers a promise even of relief should be welcomed.

In regard to the cases reported by practitioners who see but few, and then only at long intervals, there often remains some doubt as to the correctness of their diagnosis. Dr. Porter published in the *St. Louis Weekly Medical Review*, in the spring of 1889, a paper in which he analyzed a large number of such cases reported of supposed relief of gall-stones by the use of olive-oil; he appeared to show that the treatment had no scientific basis; that the cases had not been followed sufficiently long, and that, if anything, the observers had been careless in taking notes.

DR. MAY: I am here, perhaps, as the innocent champion of olive-oil in the treatment of this disease. Having had some very favorable results from its action in three cases of gall-stones, I proposed the subject to the Polyclinic Medical Society for further investigation. From my own experience with it, I think that we ought to be very careful and not make any dogmatic statements concerning the action of this oil. Even if we do not know how an agent acts, we are warranted in ascribing some usefulness to it if it does the work which was intended it should perform, and especially if we were unable to accomplish this with anything else. I believe the cholagogue action of olive-oil has been denied this evening, and in answer to this I would say that Rosenberg's experiments, which show its powerful influence on the biliary secretion, have been before the profession for at least a year and a half. Rutherford found that sodium salicylate was one of the best cholagogues, but the former demonstrated that the olive-oil excelled the latter agent as a biliary stimulant. In view of this influence, it is easy to see how it acts in this disease, and it is also easy to see how the sodium salicylate acts beneficially in similar cases.

Dr. Price seems inclined to doubt that the concretions which are evacuated after the oil is adminis-

tered are true gall-stones. This is, of course, difficult to determine in many of the cases which are reported, but at least in one instance (Dr. D. D. Stewart's case) the concretions were examined by Dr. Leffmann, and by him pronounced true gall-stones.

I can hardly agree with the opinion of Dr. Walker that the sending out of inquiries concerning the action of any agent in biliary colic would have brought similar favorable replies. There is too much unanimity, I may say, in the reports favorable to the action of the oil to give the least countenance to such a belief. Besides, we endeavored to guard against this very uncertainty. The circular asked expressly whether any other agents had been given, and with what results. In the great majority of cases, all the known remedies had been tried, with doubtful results, or with failures. Many observers stated that no agents had given such signal relief as sweet-oil.

If we believe in the efficacy of cholagogues to relieve the attacks of biliary colic, and are in search of an agent having a similar action to prevent their recurrence, then I think it is useless to advocate the action of chloroform in this disease, as has been done to-night. So far as I know, chloroform is not a cholagogue, but may act by relieving the spasm of the gall-ducts, and by having a solvent action on the calculi. I can more readily see how olive oil would prevent such recurrence, since it is one of the best stimulants to the hepatic secretion that we possess.

The Polyclinic.

LEAVES FROM A PRACTITIONER'S JOURNAL.

STRAMONIUM FOR HYSTERO-EPILEPSY.—A widow, thirty-three years old, had had epilepsy for several years; the affection dating from a miscarriage. The fits were of the *petit mal* type, never severe, and occurred most frequently about the menstrual period. Nothing abnormal could be discovered about the genital apparatus. The attacks were accompanied with very singular manifestations. At one time, an attack coming on in the street, she disrobed, and came home nearly nude, leaving her clothes on a step. No erotic tendency was present. Bromides were given with a free hand, pushed to the production of muscular debility; but no benefit ensued. For four months she has been taking the following prescription:

R.—Potassii bromidi..... ℥iiss:
Ext. cascarae sag. (P. D. & Co.) ... ℥ij.
Ext. glycyrrhiz. fl. f℥ij.
Ext. stramonii sem. fl. ℥ss.
Aquæ..... q. s. ad ℥iv.

M.—S. f℥j four times a day.

The extract of stramonium is a tincture made from seeds gathered last fall by myself and covered with alcohol; four fluid ounces being obtained from four ounces of the fresh seeds. During the time she has taken this prescription the patient has had no fits, except once, when she had neglected to have her medicine renewed.—*Waugh.*

TRANSMISSION OF PUS PRODUCING MATERIAL.—A lady passed safely through her first confinement, but two months later suffered with a hordeolus on the lower left eyelid. This was followed by another on the upper eyelid, just opposite. Then came a transfer—by the fingers, I believe—to the right breast, and a small abscess close to the nipple. The

baby then appears to have gotten some of the pus into the left nasal duct, for his left eye (the one that lay on the suppurating breast) became inflamed, and suppuration appeared in the orbit, forcing the eye almost out of the socket, and discharging from the nose and through the gums into the mouth. Then the mother's left breast became inflamed, and a similar abscess resulted.

Under antiseptic treatment, in which Marchand's peroxide of hydrogen figured largely, all these suppurations ceased; and the child's vision appears to be unimpaired. But the pus production lingered in the deeper portions of the nasal tract, until the peroxide was applied pretty liberally, with a syringe.

It may be well to add that for injecting peroxide the Koch syringe should be used, as the leather piston of the ordinary hypodermic soon melts away under its influence.—*Waugh*.

ABUSE OF ANALGESICS.—With all such general relievers of pain as morphine or phenacetine, there is danger in the too universal applicability of the drug. One is tempted, in the hurry of a busy life, to prescribe for the pain, homœopath-like, without seeking for the cause. An instance: A lady suffered periodically from pain in the back, of a sickening character, meaning always at least a week in bed, and a varying period of wretchedness following, until suddenly she would find herself free. The meaning was found in an ovary in Douglas' cul-de-sac; a very tender, irritated ovary, that could not be touched without inducing exquisite pain. But in the genu-pectoral position, gentle manipulation replaced the organ, and tampons of wool soaked in glycerine subdued the congestion and retained the ovary in place. Very simple and easy; but why did not the able practitioners who had charge of the patient previously do this, instead of resorting to that refuge of lies, the hypodermic syringe?

—*Waugh*.

UTERINE DISPLACEMENTS THAT CANNOT BE RETAINED BY PESSARIES.—There are many women whose tissues are so fragile that hard pessaries cannot be worn more than a few days without injury. One of this class came to me recently. For over a year she had been worrying with a retroflexed womb, and had, literally, pessaries by the dozen; but in every case, after two or three days of comfort, leucorrhœa, abrasions of the mucous membrane, deepening into ulcers, backache, pain and tenderness of the uterus, ovarian aching, and the rest, made their appearance. The supporters were thrown aside, and balls of wool substituted; at first soaked in glycerine, and, when all tenderness had disappeared, covered with an ointment of tannic acid in petrolatum. The change in that dame's appearance for the better in one week was startling, to any one who did not know how quickly a neurotic woman re-acts when a chronic source of irritation is removed.—*Waugh*.

PARAFFINE IN DIPHTHERIA.—We have had an outbreak of diphtheria in this city since last April, and although the disease has been greatly checked by the prompt action of the sanitary authority in closing one of the elementary schools, yet some hundred cases have occurred. I have treated thirty cases—children and adults—with paraffine, and have had the satisfaction of seeing every one recover. My plan is to ask for the ordinary paraffine used in lamps, and having scraped off the diphtheritic patch to apply the

paraffine to the inside of the throat every hour with a large camel's-hair brush. As a rule the throat gets well in twenty-four to forty-eight hours, and with improvement in the throat the paraffine is applied less frequently, but I continue its use for two or three days after the complete disappearance of the patches. In three very severe cases I found that, as the diphtheria gradually disappeared, tonsillitis supervened, which I treated in the ordinary way.

I find from experience that it does not do to allow the paraffine to stand in an open vessel; it seems not to have the same curative effect if exposed long to the air. It should be poured out from the can each time it is used.

I can speak definitely as to the therapeutic effects, but am unable to state what the chemical action of paraffine on the diphtheritic membrane is; I can only suppose that the hydrocarbons in the liquid exert some powerful influence on the membrane. I cannot see why, as the local action of paraffine is so beneficial in these cases, it should not exert an antiseptic influence if vaporized and mingled with the air in a room occupied by a diphtheria patient.

In conclusion, I would say that I have ordered a generous diet for the patient, and a mixture containing t. ferri perchlor. and potass. chlor. to be taken every three or four hours; and that in some cases, where owing to the lateness of the hour there was an impossibility of obtaining the medicine, the throat having been brushed diligently with paraffine through the night, there was a decided improvement in the morning before any of the mixture had been taken, showing that the improvement was due solely to the paraffine treatment.

—A. M. Sydney Turner, *Brit. Med. Jour.*

INFECTIOUS ORIGIN OF RICKETS.—Dr. Stephano Mercoli alleges, as the result of certain bacteriological researches, that pyogenic microbes are present in the nerve tissues of persons suffering from sciatica, chorea, and hydrocephalus, and the most common of those found are the staphylococcus and streptococcus. He has also been examining most minutely children who have died from hydrocephalus and rickets, and from the bony tissue of the latter, ribs, forearms, and so forth, he has been able to obtain, so he affirms, pure cultures of pyogenic microbes. According to this authority rickets is a parasitic disease; he believes that in adults the microbic activity is not enough to cause more than a local manifestation of the disease, whereas in children the infection becomes general; but it is chiefly in the nervous and osseous tissues in which its effects are most manifest. It would be convenient if we were made a little more acquainted with the details of these bacteriological investigations, before being asked to accept the results to which they are presumed to point.—*Med. Press*.

DIARRHŒA OF CHILDREN.—The *Country Doctor* submits this formula, which has done him yeoman service in intractable cases of summer diarrhœa with green foetid stools.

R.—Phosphate of soda.....	gr. xxiv.
Syrup ipecacuanha.....	℥iv.
Syrup rhubarb.....	℥j.
Tincture nux vomica.....	℥viiij.
Essence peppermint.....	℥x.
Hot water.....	℥j.
Simple syrup.....	℥iiij.

Dissolve the phosphate of soda in the hot water and then add the other ingredients. Dose from one-half to one tablespoonful every four hours.

The Times and Register

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THE College of Physicians and Surgeons of Chicago has taken a new departure, in organizing a fourth year of medical study, to be pursued in the preceptor's office. It cannot be denied that much is to be acquired from an association with a preceptor, that is not supplied by the medical college or by the hospital clinic. Even to the resident, fresh from a year spent in the hospital wards, the conditions, and even the ailments, met in private practice, are new experiences. Of course, the knowledge to be obtained from the preceptor will depend on the amount he himself possesses, and on his capacity for imparting it. As this is the first introduction of the student to the mysteries of medicine, it is of the utmost importance that the impression thus made on the virgin wax should be a good one, as it is apt to be indelible. We have never found any task in teaching so difficult as to uproot the errors implanted in the student's mind by his preceptor. It is therefore most wise in the Chicago college to undertake, in some measure, the direction of the student during this important period.

The regulations prescribed are as follows:

1. Non-residents may matriculate to take the first year's course in the same manner and under the same conditions as if they proposed to take a resident course.
2. Non-resident students will be required to select a preceptor satisfactory to the Secretary, and one who is willing to co-operate with the faculty in conducting the year's work, and give his certificate for the same at the end of the year.
3. Non-resident students must do the prescribed work and make satisfactory weekly reports of progress in the manner provided by the faculty.
4. The course covers thirty weeks, and not more than five weekly reports may prove unsatisfactory without debarring the student from the credit of the course.
5. When a student can furnish evidence of having already taken the work in the prescribed non-resident course, he will be assigned an equivalent from a special course.
6. Students who have taken the non-resident course in a satisfactory manner, and have shown by the weekly examinations that they have done the work thoroughly and intelligently, will receive certificates from the Secretary, which, with the certificate of their preceptor, will be taken at this college in lieu of one year's study on a four year's course.

The study of biology and physics is looked upon by the faculty as the most desirable foundation for the study of medicine and surgery. It has not been thought advisable to duplicate the resident course, but rather to supplement it. The following outline will give an idea of the plan of study as prepared by the faculty:

A. BIOLOGY.

(a). Invertebrate Anatomy and Physiology.

The lessons during the first month comprise the study of the fresh or salt water clam and the cray-fish or lobster. Dissections, drawings, and four written examinations.

(b). Vertebrate Anatomy and Physiology.

The next three months will be occupied in the study of the frog, the hen, and the rat or the rabbit, and other accessible vertebrates. Dissections, preparations, drawings, and twelve written examinations.

(c). Anatomy of Plants and Methods of Histological Study.

The remainder of the year will be occupied in the study of the physiology of unicellular plants, germination, methods of histological study, and such other subjects as will be suggested in the progress of the initial course.

B. PHYSICS.

(a). The reading of a suitable text-book on physics, weekly examinations during the whole course.

(b). Experimental work, which can be carried out at home with the material accessible in any village and with little expense.

C. LATIN.

It is recommended and expected that every student undertake, at the same time, the study of Latin under a competent teacher.

This course might well be extended by the addition of elementary chemistry, which would allow a fuller instruction upon this important branch in the subsequent college course. If algebra is not included, it should only be because a knowledge of its principles is exacted of the student who enters upon this preliminary course. With these topics fairly mastered, the student will be a far more satisfactory individual to teach than if he is not familiar with them. As the speed of a fleet is that of the slowest ship it contains, so the progress of a class will be regulated by the dullest and most ignorant member.

As the Illinois State Board of Health has announced that it will accept this year with a preceptor as the requisite fourth year of the medical course, it is likely other colleges will follow the example of that in Chicago. All that is needed, then, to conform to the British standard, is to tack another year to the other end of the course, to be spent in the hospital as resident, or in the dispensary as assistant. Such a course, with reasonable strictness in examinations, would leave little to be desired.

PHYSIO-MEDICALISM.

WE had a chapter recently upon "Kitchen Remedies," that seems to have attracted some attention, receiving the high honor of quotation in an English medical journal. Perhaps a few extracts from our esteemed contemporary the *Physio-Medical Journal*, may edify our readers as to that peculiar system. One of the *Physio-Med's* patrons, in explaining his singular conduct in putting his case in the man's hands, tells an unintentional truth in saying: "I know you can't do me no harm."

For some swelling and soreness of the feet, due to close application of rubber boots according to the patient, but to "weakness of the nervous system," wearing faded stockings, and "the poisonous dyes from the stockings were drawn in through the pores," according to the *Physio-Med*, the latter bathed the feet in a decoction of one herb, and gave six more internally, succeeding handsomely in keeping the man under treatment for three weeks.

For frosted feet, the same practitioner applied a bath of "chicken manure," that "made a complete cure."

For his mother-in-law's dyspepsia he prescribed No. 6, in teaspoonful doses; but the old lady's constitution triumphed over the remedy, and she actually recovered.

Here is an extract from the P.-M. Society proceedings:

"*Diuretics*.—Dr. ——— had a case, rather peculiar, that, while it did not come under the head of diuretics, yet there was a need for diuretics, and he would report the case so as to get some information as to how best to relieve the condition. Case was a young lady, aged nineteen years, nervous, bilious temperament. Had an antero-posterior curvature of spine, of twelve to eighteen months' duration. Patient very nervous, bad digestion, but little appetite, eating in two days not more than a sufficiency of food for more than one meal; bowels constipated, menses not appearing since April; goes three days without passing a drop of urine, then for one or two days will pass the normal quantity; has hemorrhage from the mouth on exertion; urine high colored when she passes any, tender in epigastric region; sick at all times; has not had to exceed two hours' sleep out of the twenty-four for months. Greatest pain is in the stomach and back, but shooting pains all over the body, now here, then there; partial paralysis of lower extremities, with left leg the worst; was a strong girl until this attack. Thinks the trouble started from picking up a tub of water and tripped her foot against something and suddenly strained her back, producing what the doctor who was called at the time said was a retroversion of uterus and probably injuring the spine. Patient now has retroversion. The hemorrhage from mouth and discharges from stomach at emesis are offensive. Would like to know what kind of a diuretic to give such a case.

"Dr. ——— remarked that he could see no direct connection of the lack of urine and the spinal curvature, except it would be by proximity of structures." * * * "The disturbed state of the stomach and nervous system indicated uremic poisoning. How to correct the condition he could not tell. The doctor having the case in charge knew more about conditions and could prescribe more rationally for the case.

"Dr. ——— said that he had placed the patient on:

R.—Fl. ext. composition,
Fl. ext. caulophyllum,
Fl. ext. helonias,
Fl. ext. capsella..... āā 3iv.
Syrup simplex 3ij.

M.—Sig. Give teaspoonful every three hours.

"Also, gave spice bitters. Case had improved under the treatment."

Poor wretch!

Of the two learned physicians who discussed this case, *one was a Professor of Physiology and the other Professor of Practice in a Physio-Medical College!*

The whole publication constitutes a lamentable illustration of the laxity of our laws, that allow persons densely ignorant of the first principles of the medical art to practice as physicians, and even to hold, as professors and trustees of a medical college, the right to teach and license others.

Annotations.

TO facilitate the examination of cases of abdominal affections, a Russian surgeon puts his patients into a bath-tub. He says that he thereby secures relaxation of the muscles, ease of assuming various postures, and less pain on pressure.

It is easy to dismiss such a suggestion as absurd or impracticable; but there is no question but that a diagnosis could be far more readily and completely secured, were the patient to be placed in the bath. More than once, a case that baffled every effort to comprehend it has been promptly cleared up when the patient stripped to the skin.

MALARIA AND BALM TREES.

IN the *Cleveland Medical Gazette* Spiers contributes an observation to the study of malaria. The roots of a balm of Gilead tree had penetrated to the water in the family well. The water was free from noxious qualities until the tree died; and very soon after this the use of the water began to be followed by malaria, unless the water was first boiled.

The writer appears to be undecided whether the tree acted as a preventive of malaria; whether this virtue was due to the tree being a balsamiferous one; or that any other variety of a tree would have answered equally well; or whether the malaria was caused by the presence in the water of the dead roots.

THE Practitioners' Club of Chicago started most auspiciously on its career, at the Palmer House, August 31, with a dinner, over which, as chairman, Dr. C. W. Earle presided in a most genial and paternal manner. The object of the club is to cultivate the social and fraternal qualities of its members, and afford an opportunity for friend-making in the profession. Incidentally, some medical topic is discussed in a familiar manner; but the leading feature of the organization is to enable its members to break bread together in cheerfulness and good fellowship. About sixty sat down at this initial meeting, and towards the end of the repast a set of by-laws, previously prepared by the temporary executive committee, was adopted, and the temporary officers confirmed in their functions. There are to be monthly meetings, and the membership is limited to two hundred. The subject for discussion was The So-called Bichloride of Gold Treatment for Dipsomania, opened formally by Drs. A. H. Foster, Elmer S. Pettyjohn, Homer M. Thomas, J. M. Patton, and Sanger Brown, and continued briefly by Dr. Waugh, of Philadelphia, Drs. Culbertson, Church, Hollister, Clark and Hamilton. It is needless to say that reporters of the daily press were within ear-shot, and deliberately misrepresented nearly every speaker, warping everything into line of favor for the much-advertised institution at Dwight. A most enjoyable evening was closed by the singing of America in an extremely hearty manner. The meeting gives promise of much usefulness and success for the new club, the distinct need of which has been long felt. Geo. H. Cleveland, M.D., is the secretary and only permanent executive officer.

—*Chicago Med. Recorder.*

LAUDER BRUNTON says that the poison of the toad resembles erythrophloeum in its effects; producing the uncertain gait, convulsions, and paralysis, like the ordeal poison.

Book Notices.

DISEASES OF THE NASAL ORGANS AND NASO-PHARYNX. By WHITFIELD WARD, A.M., M.D. New York: G. P. Putnam's Sons, 1891. Cloth; 12mo.; pp. 165.

In this book the author has endeavored to present the advances made in this specialty during the last few years. No space is wasted over obsolescent operative procedures, but the latest and most approved methods are given. Of the forty-one illustrations, nearly all depict surgical apparatus. The therapeutics given are generally commendable, concise, and yet explicit. In speaking of the abortive treatment of acute coryza, he commends the local application of pure boric acid; adding morphine if pain ensues.

THE HAYTIAN QUESTION. By VERAX. Price, 25 cents. New York: Louis Weiss & Co., No. 116 Fulton street, 1891. Paper; pp. 111.

Those interested in Hayti may find this pamphlet of interest; though as it is an anonymous publication, but little credence is to be given to statements the author does not see fit to vouch for with his own name.

SECOND REPORT OF THE SUPERINTENDENT OF THE JOHNS HOPKINS HOSPITAL, for the year ending January 31, 1891. Baltimore: The Johns Hopkins Press.

One thousand five hundred and fifty-nine patients were treated in the hospital, with 87 deaths. The average time spent in the hospital was over twenty days. In the dispensary, 14,582 cases were treated. No particulars are given as to expenditures.

The proceedings of the last meeting of the American Medical Association are being reprinted in small volumes, each containing the work of one section. The volumes that have thus far appeared are those of the sections of Practice and Physiology, Surgery and Anatomy, and Obstetrics and Gynecology.

ELEVENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF NEW YORK. Two volumes. 8vo.; pp. 935; paper covers. With numerous maps and plans. Albany: 1891.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH AND VITAL STATISTICS OF THE COMMONWEALTH OF PENNSYLVANIA. Harrisburg: 1891.

These reports should be in the hands of every physician in the State. The work done by the Board may be judged by the fact that 168 reports are embraced in the Pennsylvania volume. The character and practical value of these is exemplified by the report made by Dr. Dudley on the diphtheria at Gallitzin. Many physicians had tried their skill on this disease at Gallitzin; some, who prided themselves on their success elsewhere, bringing their favorite remedies to help out their Gallitzin brethren, but to no purpose, the disease assuming a malignant form that baffled all treatment. Dr. Dudley made an investigation, and revealed the true cause of the malady.

"The cause may be summed up fairly in one word, namely, filth. The wells are frequently not twenty feet from the privies. Not a single foot of sewer is laid in the borough. The house slops are usually thrown on the ground back of the house, and, of course, the water in the wells of those lower in the town gets the drainage, not only of the

privies, but also of the cesspools and house slops of those living on higher ground."

"The only remedy is a dissemination of information, and, by the building up of public sentiment and encouragement of public cleanliness obtaining a better sanitary condition of the place."

It is a great pity the powers of the Board are not extensive enough to enable it to remedy such flagrant cases. Gallitzin has for years suffered from diphtheria, and this is not the first time the State Board of Health has pointed out the difficulty.

"PULMONARY CONSUMPTION A NERVOUS DISEASE." By THOMAS J. MAYS, M.D. Detroit, Mich.: Geo. S. Davis, publisher. Cloth, 50 cents; paper, 25 cents; pp. 185.

The medical intellect is surely capacious enough to grasp both sides of a question even as intricate as that of the pathology of consumption. Whether the current view as to the bacterial origin is disturbed or not, it is doubtful if the opposition could be more ably presented than it is by Dr. Mays.

TABLES FOR DOCTOR AND DRUGGIST. Comprising: Tables of solubilities, reactions, and incompatibles; doses and uses of medicines, specific gravities, and poisons and antidotes. Compiled by ELI H. LONG, M.D. Detroit: Geo. S. Davis, publisher, 1891.

The object of this book is to bring into convenient form for ready reference information of the character most likely to be needed.

A HAND-BOOK OF OBSTETRICAL NURSING, FOR NURSES, STUDENTS, AND MOTHERS. By ANNA M. FULLERTON, M.D. Second edition—Revised. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street, 1891. Pp. 222; 12mo.; cloth.

The main revisions have been in the chapter on the care of the new-born infant, we are informed in the preface. The information therein is not characterized by any extraordinary originality or brilliancy. A specimen may suffice to show this: "Many physicians prefer not having the baby bathed after this greasing." Not a word as to why this preference, nor of the author's opinion; simply the bald statement, utterly useless as it stands. And yet the initial bath, in cold weather, is responsible for enough deaths to warrant a word of warning.

Again: "A wall-thermometer, costing 15 cents, may be obtained at any drug store for the purpose"—of testing the temperature of baby's bath. We once noticed a row of these cheap thermometers in a drug store window, and examined them to see if they registered alike. No two agreed as to the actual temperature; and between the highest and lowest the difference was over 40°. We suggest that Dr. Fullerton, in her next edition, substitute the nurse's rule: "If the baby comes out of the bath red, it is too hot; if blue, it is too cold."

We strongly suspect that Dr. F.'s volume contains the fruits of much reading and very little practice.

SYLLABUS OF THE OBSTETRICAL LECTURES IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA. By RICHARD C. NORRIS, M.D. Second edition. Philadelphia: W. B. Saunders, 1891. Cloth; 12mo.; pp. 198; price, \$2.00.

"Much of the text has been rewritten and new material added, notably in the chapters on Infant Feeding, Pathology of the Puerperium, Obstetric Operations, and Dystocia." An index has also been added. The volume is interleaved, for notes; an excellent plan for students' accommodation.

The Medical Digest.

AN UNUSUAL FORM OF CHANCER.—On January 13, 1891, a professional man from India, aged forty-nine, and intemperate, consulted me for a chancre which had appeared a week before. About twenty-seven years ago he had chancroids and suppurating buboes, which healed very slowly. The sore was on the dorsum, one-third of an inch behind the corona, and there were hard enlarged glands in each groin. Small doses of blue pill, small inunction in the groins, and dry lint were ordered. Good progress was made for a fortnight, but then the sore began to extend slowly, and there arose round it, except towards the corona, a thick ridge. This near the frænum was œdematous, but above there was a semi-solid deposit in the areolar tissue of the preputial folds. Many local applications were tried without effect, and iodoform seemed only of little service. On March 9, iodide of potassium was prescribed, together with the mercurial treatment. After ten days the skin over the hardest part of the ridge gave way, and matter similar to that in gummata came out. Improvement followed, but so slowly that it was April 13 before cicatrization was complete. It ulcerated again superficially on the 20th, but finally healed in three weeks. The enlargement of the glands has become absorbed, and no secondaries appeared. The peculiar deposit and the extreme slowness of healing, due probably to the age, habits, and former residence of the patient, seem to render the case worth recording. A somewhat similar form was described by Fournier.

—Mapother in *The Lancet*.

CHLORPHENOL.—A VOLATILE ANTISEPTIC.—This is another effort directed to destroy the tubercular microbe which Dr. Passerini has proved to be a success! The same experimenter has long endeavored to modify the *Trichlorphenol*, but the odor and irritation to the mucous membrane is always a serious objection to its use. Dr. Tacchini, of Pavia, has now obtained a preparation of *Chlorphenol*, which has as much antiseptic power as trichlorphenol, and is free of all the objections against the latter. Chlorphenol is a very volatile fluid, whose vapor is heavier than air. When applied to wounds, ulcers, and discharging glands the improvement is marked.

Ozæna, laryngitis, bronchitis, and more particularly tubercular affections are beneficially affected. Passerini has treated five of the latter cases with the vapor, which being heavier than air, presumably reaches the bronchioles, if not the alveoli of the lung itself, and he finds that the bacilli rapidly disappear after commencing the inhalations. All the five cases have quite recovered, varying from two to six months from beginning of the treatment, and are apparently well at the present time.

The claims put forth are :

1. The inhalation of chlorphenol is easily borne in advanced phthisis, and is convenient in application.
2. No injurious effects arise from its continuous use.
3. Changes in the quality and quantity of expectoration till pus and bacilli disappear; cough is diminished; fever is reduced; appetite and sleep soon return; the weight of the body increases rapidly, and the local improvement is speedily performed.

Hence, the three conditions, applicability, innocuity, and efficacy, are the dominant recommendations of the drug.—*Med. Press and Circ.*

DISLOCATION AT WRIST-JOINT.—My case occurred in a boy, aged twelve years. The patient was out playing hockey on the ice, he fell, and in the act of falling struck his hand on its outer aspect against a lump of solid ice. On arising he found, as he remarked, that his wrist was broken.

On examining the injured member, I found marked distortion of the parts about the wrist-joint, a marked prominence on the anterior and lower aspect of the forearm, and a still more prominent point on the lower and posterior part of the forearm. There was marked shortening of the distance between tip of middle finger and the ext. condyle of humeru. Total loss of function at the wrist-joint, great pain, not limited to any point, but diffuse. No crepitus. Styloid processes of ulna and radius intact and bearing their proper anatomical relations to each other. I could feel the lower articular surfaces of "ulva" and radius quite distinctly at lower and ant. part of the palmer, the whole carpus being thrown violently backward and slightly outward on to lower aspect of forearm.

The case simulated a fracture of lower extremity of ulna or radius, or both, and also separation, with displacement, at the epiphysial juncture.

I reduced the deformity quite easily, by gentle traction on the hand, and counter extension on forearm at elbow-joint. I applied straight, well-padded splints, held in position by ordinary surgeon's plaster; left them on for five days, then applied massage and gentle motion. Result was extremely satisfactory.—Finn, *Maritime Med. News*.

POISONING BY GELSEMIUM SEMPERVIRENS.—About two months ago Miss W., aged about forty, an inmate of my house, was seized with very severe neuralgia about both temples. I gave her tincture of gelsemium 10 minims, with a bismuth mixture to be taken every two or three hours. After taking this for about a day and obtaining no relief—but rather she grew worse, being, as is described, "nearly mad with pain,"—I gave her the full dose of the tincture of gelsemium, according to Squire's *Companion of the Pharmacopœia*, 1882, and Whitla's *Materia Medica*, 3d edition, namely, 20 minims in a quinine mixture. This was taken every three hours, but with only moderate relief, three or four doses having been taken during the night. At about eight o'clock the following morning Miss W. was able to speak pretty well, and said she though she was better. At about nine o'clock she was speechless and in the greatest distress of mind and body; there was total loss of power in the tongue; it could not be protruded, she could not articulate, and with very great difficulty could she swallow the brandy and water we forced upon her. There was alteration in vision; she could not distinguish us clearly, and the pupils were widely dilated. She had uncertain power over the muscles of the hand and arm, so that she could not write her name. All this time she was perfectly conscious, and nodded her head in answer to questions. She was greatly alarmed as to herself, and, as she informed us afterwards, she thought she was about to have a fit. Not knowing of any special antidote for gelsemium, and seeing that there was no time to lose if we wanted to avert any increase of the paralysis, it fortunately came into my mind to give her a subcutaneous injection of strychnine, using 1 minim of the liquor strychnine, or 1-120th part of a grain. Ten minutes after this the change for the better was most marked; there was return of power in the tongue and in the hands, and an improvement in the vision.

At this juncture I was glad to have the help of my neighbor, Dr. Barron, and consulted with him the various authors of books on the use of this drug and its antidotes, but with no satisfaction, and with his approval I again injected a minim of the strychnine, and with further improvement in the condition of the patient. After this she took food and stimulants, and all paralysis disappeared. The vision was not perfectly restored for some hours, the pupils being less dilated. She had some return of the neuralgia, and was very weak for a few days, but eventually she quite recovered, and has had altogether better health since this event, than she had prior to it.

—Edward Jepson, *Brit. Med. Jour.*

A PECULIAR epidemic of intestinal diseases in Albany and vicinity has been studied by Craig. The results are given in the last number of the *Sanitarian*. His conclusions are as follows:

"Excluding from consideration the abdominal type of la grippe, and the diarrhoeas caused by bad food, and sudden changes in temperature, I believe the epidemic diseases prevalent during the past winter to have been due:

"1. To the following contributing causes:

"(a) An ice-bound condition of the Mohawk and Hudson rivers, whereby contaminated water was not sufficiently aerated, and the destruction of such contamination by oxidation was prevented.

"(b) Additional contamination occurring after thaws and rains, the earth being frozen and preventing absorption, and the surface accumulations of decomposing animal and vegetable materials being washed directly into rivers and wells.

"(c) Non-acclimated persons drinking for the first time water to which they had not been accustomed.

"(d) Polluted milk supply. I am informed that a number of cases of typhoid fever, in Albany, occurred among people using milk obtained from the same milkman.

"(e) Sewer gas acting as a debilitating agent, and, in occasional instances, as a direct cause.

"2. And to the following as a chief cause:

"(a) Typhoid fever and diarrhoeas endemic in Schenectady, caused by the use of either the polluted city water or private wells, or both.

"(b) The water of the Mohawk, contaminated by the city sewers of Schenectady, polluting the water supply of the city of Cohoes at the intake at Crescent, above the Cohoes Falls.

"(c) The water of the Mohawk again contaminated by the city sewers of Cohoes, below the falls, and polluting the drinking water of both West Troy and Albany.

"If I had any bias at all at the beginning of this investigation, it was in favor of the river water as a proper and healthful source of public supply. It is, to me at least, a most convincing argument that the above conclusions were forced upon me by the powerful logic of the facts obtained."

TREATMENT OF CHRONIC NEPHRITIS.—We have first to consider the progressive tendency to destruction of the kidney, either by primary degeneration of the epithelium or by its destruction under the contracting interstitial substance. In the first place, there should be avoidance of all the causes which would provoke the diseases—exposure to cold and wet being among the most important dangers; flannel should be worn; overwork, bodily and mental, given up. A climate free from both coldness and dampness sought if possible. As it seems highly probable,

from many researches on the subject, that some of the symptoms are due, not to the simpler and more familiar products of nitrogenous decomposition, such as urea, but to the more complicated ones with which we are becoming acquainted, as ptomaines and toxic albumens, it is desirable that the nitrogenous foods should be presented in a form least likely to undergo abnormal changes. Hence, a heavy meat diet is not desirable. The amount of actual loss of albumen is, in most cases, not great, and it is not necessary to push animal food with a view to making up the deficiency. The vegetable proteids are capable of fully maintaining the nitrogenous equilibrium. More than this, it is not only not necessary, but throws increased and entirely avoidable labor on the kidneys, either as albumen or as excess of urea and uric acid.

The amount of meat should be regulated with reference to anæmia, and also the digestion of the particular patient in question, but should never be excessive.

Milk is an excellent food and, in some cases, an exclusive, or almost exclusive milk diet can be employed, for a time with great advantage. Of course it cannot be prolonged indefinitely without additions and modification.

Tonics, especially iron, may be used. The preference is sometimes given to some of the ether-containing preparations, like the tincture of the chloride; but if any other form is more easily borne, the ether (say spirits of nitrous ether) can be added if necessary.

Water is of great importance. The value of a great number of spring waters, which have a reputation in such cases, depends mostly on the ingredients of which least is said—*i. e.*, on the water itself, and not on the trivial amount of sulphate of soda, carbonate of lime, or infinitesimal trace of lithia dissolved in it. If there is a tendency to excess of uric acid, an alkaline water should be selected.

In *interstitial nephritis*—the cirrhotic kidney—we have to consider not merely the state of the kidney, but the condition of the circulation which so frequently accompanies and precedes it.

A great deal of use has been made of the nitrites, especially nitro-glycerine, with a view to diminishing the arterial tension. It is very doubtful whether the slight and temporary diminution produced by the doses usually given could be expected to be of great value. Certainly the results have not seemed to give decisive proof of it.

The alterative metals—mercury, silver, and gold—have been used.

Bright was certainly right in warning against mercury. The constitutional action of this drug is exceedingly inimical to the renal epithelium. This need not prevent the administration of calomel as a cathartic if considered specially desirable.

Gold appears to the writer to be as futile in controlling the formation and contraction of new interstitial tissue in the kidney as its sister, silver, has been found in similar conditions of the nervous centers.

Among the complications.—Edema being of long duration and often extreme, is likely to call for decided treatment. This may be of the eliminative kind, remembering, however, that in this case it is water, and not especially the urinary solids, we wish to carry off. Hence, drugs requiring the ingestion of much water should be discarded for those that may be given in small bulk, like the resinuous cathartics.

Rest in bed often diminishes the cedema, but is much more likely simply to change its location. Mechanical relief, by tapping the great cavities, as in

hydrothorax and as ascites, or the subcutaneous cellular tissue, is often called for. Punctures and incisions, if made with clean instruments, are not to be dreaded as causing local inflammation. They often drain for hours or days with advantage.

Edema of the lungs demands similar but prompt treatment, together with stimulation of the heart. The writer considers that, under these circumstances, the diffusible stimulants, alcohol, ether, and ammonia, are of more value than digitalis. Some physicians consider musk and castoreum as valuable stimulants to the flabby and dilated heart. Bleeding may be useful, especially in terminal uræmia.

A word may be added as to the *use of morphine in the headaches* of interstitial nephritis. It is said by some persons that morphine should be given with great caution if there is any albumen in the urine; and the writer cordially subscribes to this sentiment, and is willing to add that it should never be given to anybody under any circumstances (except perfect familiarity with the patient and his idiosyncrasies) without great caution. This caution, however, should not be so great as to deprive such patients of the great relief which may be obtained by quite a small dose subcutaneously for the relief of intense headache. There are few circumstances under which it displays its powers more favorably than in these. Its use in convulsions was before spoken of.

Caffeine is often extremely useful.

—Edes, *West. Med. Reporter*.

ANTAGONISM BETWEEN AGUE AND PHTHISIS.—I should like briefly to call attention to the possibility of there being an antagonism between malaria and phthisis. I was surprised in my journey to Central Africa to notice the distribution of phthisis, for although bronchitis, pleurisy, and pneumonia were constantly seen in nearly all the districts through which I passed, the cases of phthisis which I was able to observe were few and far between, and corresponded in a marked manner with the absence of malaria, at any rate, in its most intense forms. From Khartoum, along the valley of the White Nile, as far as the Albert Lake, through the swampy districts of Unyoro and Uganda, I can recall having seen only very few cases of phthisis (in Uganda some eighteen or twenty). Subsequently, however, on my return journey, I saw a considerable number of cases in the Shuli district, at an altitude of from 3,000 to 4,000 feet, where malaria is very rare, and where, I may mention in passing, I think that Europeans could colonize. Again, in traveling through the Bahr-el-Ghazal district, I saw a considerable number of phthisical individuals, not inhabitants of that province, but men and women, soldiers or slaves, who had come from the elevated districts in the Mombuttu country. Further north, at Dara, I again met with phthisis in people who inhabited the highlands of the Gebel-Marrah region, where, I was informed, malarial fevers were entirely absent.

During the last few years (it may, of course, be the result of accident) I have had the opportunity of seeing several patients distinctly phthisical, in the early stages of the disease, who have since been abroad, and suffered more or less from malaria. On seeing them after their return, I found, and must say to my surprise, that in seven out of nine, all the phthisical symptoms had disappeared, and in the other two, although I could find no improvement in their condition, the disease had apparently made no progress.

M. Boudin, in 1857, put forward the theory that malaria and phthisis were antagonistic. He held:

(a) That where malarial endemic fevers are prevalent, phthisis is rare, "that the frequency of one class of cases is inversely proportionate to that of the other."

(b) That where malaria decreases phthisis increases; and

(c) That phthisis is more curable in malarious regions than in others.

These propositions were at the time vigorously discussed, but the subject has fallen out of mind. Long before M. Boudin called attention to it, in 1841, Harrison, of Horncastle, remarked on the infrequency of consumption in the Fens, and, in 1811, Wells contended that consumption and malaria were opposed to each other, and referred to many authorities to corroborate his statements. The references to the literature on the subject will be found in the "British and Foreign Medical Chirurgical Review," Vol. 23, 1859. The late Dr. T. B. Peacock, writing on the subject in 1858, did not think that any such antagonism could be proved, and published six cases which he had himself treated in which phthisis and malaria both affected the patient. Still he writes thus: "I cannot, therefore, but conclude that it is not probable any material antagonism exists between phthisis and intermittent fever. The facts do not, however, warrant the denial of the supposition altogether, and there are probably few popular ideas which have not some foundation in truth."

It is only fair to mention that Dr. Peter Gowan, once physician to the King of Siam, does not credit the antagonism of ague and phthisis, owing to the prevalence of both diseases in Siam. ("Consumption," P. Gowan, M.D., London, 1878, pp. 57-59.) Still, he admits that "it (consumption) was unquestionably shown to be almost, if not quite, absent from many such localities, and to be less prevalent where the fever was of a bad and obstinate kind." In Corea, ague, which is there called "hakuchu," is universally prevalent, although the country is generally dry, and there are few marshes or swamps. Phthisis is almost unknown.

Prof. Virchow found that nearly the whole of the population of Upper Silesia suffered from malaria, and had enlarged spleens. He never saw a case of phthisis in that region, and the doctors resident there assured him that that was the result of their experience, too. Gowan says that in all cases of phthisis he saw in patients who had also an enlarged spleen, the right lung was affected, illustrating Dr. Brehmer's theory of the causation of phthisis, and he says: "In the enlarged spleen of those who have suffered from obstinate ague we have a sufficient explanation of their comparative immunity from phthisis by the accelerating influences it exercises on the circulation within the lungs, as a result of the intermittent compression to which the bases of the lungs are subjected by this in common with all other enlargements of the contents of the abdomen." There is doubtless much to be said for the enlargement of the spleen acting thus mechanically, but, to my mind, it is an insufficient explanation of the whole matter, for the spleen is not invariably sufficiently enlarged to act in that way. I thought that I should have found something to support my view that malaria and phthisis are antagonistic, in investigating the results which have been obtained in the rearing of monkeys in this country, but, although I find that it is true the majority of monkeys do die of phthisis, yet it must be admitted that those monkeys which died at the Zoölogical Gardens some years ago died from the effects of imperfect ventilation, and, therefore, it is

impossible to class them among the deaths from phthisis proper.

In referring to the annual loss by phthisis in the army, it was in 1856 8.9 per 1,000 in the line regiments in the United Kingdom; in the Guards it was 12.5; but if we look at the mortality in Malta for the same regiments during the same time, we find it was below 5 per 1,000, and that during the same time at Mauritius and Ceylon it was only 4 per 1,000, and in the Madras Presidency below 1 per 1,000.

Numbers of observers in America have called attention to the antagonism between ague and consumption. So, for instance, Dr. Green, of Whitehall, Washington, U. S. A., said as long ago as 1858 that, though intermittent fever was of unusual frequency in that district, there was not one case of phthisis developed there, and that phthisical patients who arrived there found "relief as decided as it was permanent." He mentions also a morass near Rutland which was made into a pool, the result being that intermittent fever disappeared, and that phthisis took its place. This was the more remarkable because the re-establishment of the morass was followed by the reappearance of ague and a diminution of phthisis; indeed, it only took a half-year to establish this change.—Felkin, *Med. Press*.

HEPATIC INTERMITTENT FEVER.—Definition.—This term is used to designate a group of symptoms which often resemble and are easily mistaken for the phenomena of malarial intermittent fever, but which are occasioned by chronic obstruction of the biliary passages. In a large majority of cases the seat of obstruction is the duodenal end of the common duct, and the obstructing body is a calculus. Calculous intermittent fever is not of common occurrence, but when it does appear it is an important aid in determining the exact location of the stone.

Symptoms.—The most prominent are jaundice, pain, digestive derangements and intermittent fever.

Jaundice may be absent. Usually it is not only present, but a conspicuous feature. It exhibits frequent and great variations in intensity and may disappear altogether for considerable stretches of time. These variations are connected with intercurrent paroxysms of intermittent fever. If the paroxysms of fever recur frequently, jaundice is likely to be a constant and marked concomitant; but if they are infrequent and separated by long intermissions, the jaundice may fade away. Repetition of the febrile movements is promptly followed by renewals of jaundice.

The usual effects of impregnation of the fluids and tissues of the body with biliary elements may be exhibited in any case of calculous intermittent fever; hence, coated tongue, bitter taste, anorexia, indigestion, constipation, clayey stools, turbid, brownish-yellow urine, pruritus, slow pulse, and subnormal temperature are ordinary features. The amount of bile pigments in the stools, as usual, is related inversely to the intensity of the jaundice, and to the degree of obstruction of the ducts. If the calculous lie loosely in a dilated part of the canal, no obstruction and no jaundice may occur; but if it be forced into a narrower part, jaundice will appear and persist until the obstructing body escapes, either by way of the alimentary canal or by dropping back into the dilated parts of the bile tube. It must also be borne in mind that a fistulous opening in that portion of the common duct which is included in the wall of the duodenum, may persist after the exulceration of an impacted stone, and that bile may readily flow

into the bowels through the fistula, while the normal opening of the duct is quite occluded by another stone. These considerations explain the rare cases of hepatic intermittent fever in which febrile paroxysms are not followed by jaundice.

The Gall Bladder is sometimes so distended as to constitute a palpable and visible tumor, but in most cases it cannot be identified at all.

Pain of some kind or degree is rarely absent, but it is variable in character and intensity. In every one of my cases there was unceasing uneasiness in the epigastrium and right hypochondrium. Oppressive sensations, as of "a load on the stomach," are commonly complained of. At times there are recognizable but endurable colicky twinges. The pain and distress are almost invariably aggravated during the chill which introduces the febrile phenomena, and not infrequently the aggravation assumes the features of a violent attack of biliary colic. The severity and duration of the colic are, in some cases, at least, distinctly related to the severity and duration of the chill. In some cases, colic and chill are simultaneous, and in some, either symptom may appear a little in advance of the other. The attack of colic does not often end abruptly, but by a process of gradual amelioration. It is usually followed by exquisite tenderness in the epigastric and right costal regions and by mild fever which continues two or three days.

Gastric Disturbance is never absent. Anorexia is the rule, and not infrequently it amounts to positive loathing of food. It is often associated with a high degree of irritability of the stomach and with gaseous and sour liquid eructations. Gastric and intestinal dyspepsia are often marked. Vomiting is common. During a paroxysm of colic and the attendant chill, it is liable to be very severe, but upon the termination of these the irritability of the stomach gradually regains its minimum.

The Bowels are constipated and flatulent, and in some cases more so than usual for a day or two before and after an attack of fever. The discharges may be of normal color or clayey.

The Intermittent Fever.—The chill which inaugurates it is often as violent as that of ordinary grades of malarial fever. Sometimes it amounts only to transitory shivering. Sometimes it is absent altogether. When marked in degree it is commonly attended with colicky pain and with vomiting. It seldom lasts longer than an hour or two. Its duration and severity are directly related to its infrequency. Elevation of temperature is prompt and decided, and sometimes reaches 105° F., but usually ranges from 102° to 104°. The duration of the febrile stage varies from two to twelve hours. When the initial chill is mild, the succeeding fever is mild, and in some cases it is so mild as to be easily overlooked. In such cases the characteristic symptoms are a regularly or irregularly recurring fever, jaundice, vague colicky pains, and digestive derangement.

Sweating may be profuse, moderate, or not noticeable.

The Urine is habitually laden with bile pigments, and after a paroxysm of fever it is said to contain leucin and tyrosin (von Schüppel). Reynard claims to have demonstrated in one case that during the fever there was diminished excretion of the urine—a striking contrast with the fact appertaining to malarial fever. In one of the cases herein referred to, the presence of peptone in the urine secreted during a febrile paroxysm, was demonstrated repeatedly; while, in the same case, the urine secreted during long intermissions contained no peptone. This was regarded

as fair evidence of the existence of a suppurative process in the biliary passages.

The Intermission is extremely variable in duration. In some cases it lasts only a few hours, and in others it extends over several weeks. Its duration determines the type of fever. Of the various types, I have seen the double quotidian, quotidian, tertian and irregular in the same patient, and an example of the active type in another. Usually, however, the type of fever is irregular. The condition of the patient during the intermission is that of mitigation, but not of absolute comfort. When the febrile paroxysms are frequent, jaundice is usually constant, but, within narrow limits, variable in degree. I have seen but one exception. The patient had slight jaundice during the first three or four months of her sickness and none in the months that have followed—although the febrile and colicky phenomena have continued throughout. Emaciation and anemia progressed in every one of my cases, and they were attended with some degree of digestive derangement. When the intermissions of fever habitually last several weeks, the jaundice may fade away and the patient may feel fairly comfortable.

The Course of the affection is erratic. If the stone escape, perfect recovery may ensue, even after an illness of several months' duration. Such escape may occur without giving rise to any striking symptoms at the time. If the stone do not escape, the case may continue for years, or death may ensue from cholæmia, peritonitis or exhaustion.

Treatment.—Cholagogue purgatives exercise an undoubted influence upon the recurrence of the febrile paroxysms, but I know of no other line of medical treatment which will make a durable impression upon the course of such cases. Needless to say an imprisoned stone may escape at any time and recovery may follow. The treatment in vogue at the time is likely to be credited with the "cure," while in fact it may have had nothing to do with it.

—Quine, *Chicago Med. Recorder*.

FRENCH NOTES.

A. E. ROUSSEL, M. D.

OXALIC ACID AS AN EMMENAGOGUE.—Marsh has employed this drug in a number of cases, and always with success, no matter what the cause of the amenorrhœa. The absence of taste as well as irritating influence on the stomach render it superior to other drugs of the same class. He also recommends it as a calmate in acute cystitis. He prescribes it as follows:

R.—Oxalic acid..... 15 grains.
Syrup of orange peel..... 1 ounce.
Rain water or distilled water, q. s. ft. 4 ounces.
Sig. One teaspoonful every four hours.

—*Revue de Thérapeutique*.

INTUBATION OF THE LARYNX IN CROUP (MM. Egidi and Massei).—The advantages of the above method are as follows:

1. The operation, with a little experience, is performed almost instantaneously.
2. It is not followed by loss of blood which exhausts the patient.
3. There is no traumatism of the tissues, or pain.
4. There is no shock after the operation.
5. No danger whatever of septicæmia or erysipelas, as there would be with an open wound.
6. No irritation produced by the tube.
7. Much less discomfort than with the canula in trachæotomy.

8. No wound which must heal by granulation.
9. The air enters the lungs in the natural way and is moist and warm.
10. The patients do not require assistance as after trachæotomy.
11. Intubation does not prevent a subsequent trachæotomy, if judged necessary.
12. According to Wanam, intubation is followed by a greater number of cures, especially under three years of age.

On the other hand the disadvantages of this operation are:

1. Suspension of the respiration during the introduction of the tube, and consecutive shock, particularly after prolonged efforts to accomplish intubation.
2. False passages.
3. Asphyxia by the gradual accumulations of the secretions in the canula.
4. Falling of the canula into the trachia.
5. Asphyxia by tumefaction of the tissues above the superior extremity of the canula.
6. Lesions of the larynx produced during the efforts of the extraction of the tube.
7. Passage of the tube into the œsophagus.
8. Expulsion of the tube during efforts of coughing.
9. Propulsion of the false membranes in front of the tube.
10. Fatal occlusion by pieces of the false membrane underneath, or in the interior of the tube.
11. Ulcerations due to the compression produced by the tube.
12. Pneumonia by inspiration of septic air.
13. Pneumonia by penetration of alimentary substances into the respiratory tract.
14. Œdema from different causes.
15. Dangers arising from the application of the tube.

After this enumeration of the advantages and the disadvantages of intubation, the authors present the statistics of their operations.

Twenty-seven cases were operated upon by Dr. Egidi with 4 cures, and 3 cures were obtained by Prof. Massei out of 6 cases, making a general average of 21 per 100. These results would at first sight seem but little favorable to the operation. But Dr. Egidi is careful to note the especially pernicious character of the epidemic of diphtheria which existed during his operations; the proof of which is that trachæotomy, under the same conditions, resulted in but 4 cures out of 15 operations.

The authors then pass in review the accidents and the difficulties which presented themselves in their patients, and conclude their work by the following personal résumé:

- (a.) Intubation enters legitimately in the treatment of croup; it is without doubt our duty to try it.
- (b.) It is always indicated when other ordinary methods of treatment have not succeeded in arresting the laryngeal stenosis, that is to say under the same conditions which indicate the necessity for trachæotomy.
- (c.) Intubation may be insufficient in the symptomatic treatment; but it has certainly succeeded in doing away with the necessity for trachæotomy in several instances.
- (d.) In private practice it is prudent to obtain the consent for trachæotomy, which will be reserved in case of necessity, but always after having given intubation a trial.

(e.) If the trachæotomy has a greater chance of success the earlier it is practised, it is likewise the same as regards intubation; but *caeteris paribus* intubation may be attempted even when it is too late for trachæotomy, or when the diphtheria of the throat constitutes a counter-indication; without forgetting, however, that the introduction of the tube, *in extremis*, may provoke an arrest of respiration and instantaneous death.

(f.) The indications are therefore greater for intubation than for trachæotomy; but the most favorable moment to perform it is the same.

(g.) Intubation may be utilized as a means of diagnosis on certain stenoses of the air passages in children when these stenoses are of doubtful interpretation.—*Bulletin de Thérapeutique*.

GERMAN NOTES.

HERMAN D. MARCUS, M.D.

SYPHILIS TREATED WITH INTRAMUSCULAR INJECTIONS OF SALICYLATE OF MERCURY.—Dr. Eich reports following in the *Therap. Monatsh.*: Syphilis was treated in Prof. Leichtenstern's (Cologne) clinic by intramuscular injections of:

R.—Hydrarg. salicyl. gr. xv.
Paraffin liqu. ʒiiss.

M.—S. For injection.

One hundred and seventy-five cases were treated with the neutral and two hundred and one cases with the basic salt. The results of the observations are as follows: There is no apparent difference in the therapeutic action of the two salts. Hydrarg. salicyl. is very convenient as an anti-syphilitic remedy. The injections are positively painless. Toxic manifestations are never noticed, and the general health becomes very much improved. The duration of treatment is shorter than with other anti-syphilitic remedies (twenty-seven days). Two injections of 1½ grs. of the salicylate of mercury are sufficient, more may be used.—*Wiener Med. Presse*.

¶ EUROPHEN.—Europphen is an amorphous, yellow powder, with an aromatic (resembling saffron) odor, which is decreased when used in form of ointments. It contains 28 per cent. of iodine.

■ Europphen is more easily solved than aristol or iodoform. It is insoluble in water or glycerine, easily in alcohol, and very easily solvent in ether, chloroform, oil, and collodium.

If a sediment remains in any solution of oil it is well to filter the preparation. The precipitate being an iodine compound insoluble in oil.

Europphen feels like rosin to the touch, adheres to the mucus membrane and to wounds as firm as aristol, and more easily than iodoform. So far experiments have shown europphen to be non-poisonous.

—It is specific, lighter than iodoform, so that 1 part of europphen will cover the same surface as 5 parts of iodoform.

Ointments and solutions of europphen should be prepared in a cold condition, and never heated.

Eichhoff reports some cases, and comes to following conclusion: "If we differentiate the cases under treatment in two great groups as to their nature, as venereal and non-venereal affections, we find that all venereal lesions, with the exception of gonorrhœa, are greatly benefited by the use of europphen."

Two cases of ulcers molle were quickly cured by dusting of europphen.

Constitutional syphilis, primary, secondary and tertiary, reacts with the application of europphen whether used locally or subcutaneously.

Europphen may be, therefore, considered as a typical anti syphilitic remedy; it does not show any poisonous properties.

Regarding the non-venereal affections: Eczema parasitarium, psoriasis, and favus did not respond to treatment; while ulcerus couris scrophuloderma, lupus exulcerans and combustio were greatly benefited by europphen.

This may be explained by the fact that free iodine is only precipitated from europphen in open wounds, and not on dry surfaces.

Eichhoff recommends the following prescriptions:

For Eczema:

R.—Europphen ʒj, gr. xv.
Ol. oliv. ʒiiss.
Lanoline ʒij, ʒv.

M. ft. ungt.

For Gonorrhœa:

R.—Europphen gr. xv–ʒj.
Ol. oliv.,
Pulv. acac. āā ʒiiss.
Aq. dest. ad ʒvj, ʒij.

M.—S. For injection.

For Syphilis (as injection):

R.—Europphen gr. xxiiss.
Ol. oliv. ʒiij, ʒj, gr. xliij.

M.—S. Use as injection daily a syringeful.

—Eichhoff, in *Therap. Monatshefte*.

SULFONAL IN TETANUS NEONATORUM.—Dr. Berenyi reports the following: An eight days' old child was subject to tetanus, which attacks always appeared when the child took the breast. The skin becomes bluish during the attack, the muscles of masticating become hard, also the abdominal wall; the upper extremities cross themselves in a flexed position over the breast, the thumbs are bended, the spinal column stiff. Berenyi (Gran. Hungary) ordered, as an experiment, sulfonal, gr. iij, intra-rectal, also by the mouth. After the fifth attack, which was greatly alleviated, the child began to take to the breast. During the next days the attacks became weaker. On the fifth day they had entirely disappeared. Berenyi used ʒiiss without producing sleepiness, or any other ill effects.

—*Pest. Med.-Chir. Presse*.

SNAKE BITES.—Prof. L. Hoffman (Stuttgart) recommends the following therapie:

1. In new cases, deep incision, and washes with carbolic acid (5 per cent.) or permanganate of potassium; cauterization; ligation between the wound and the heart, to be kept up from four to six hours.

2. Against the paralyzing action of the poison, injections of ether or camphor; internally, liq. ammon. caust. and alcohol.

3. Against appearing sepsis, washes with strong antiseptic solutions—carbolic acid (5 per cent.), sublimate (1 per cent.) locally, and careful constitutional treatment.—*Deutsche Zeitschr.*

RESORCIN.—For Gastritis with Constipation:

R.—Inf. rhei ʒij: ʒv, ʒv.
Tr. ignat. amara,
Tr. rhei vinosa. āā ʒj.
Resorcini resubl. (Merck) ʒss.
Elæosacch. menth. ʒiiss.

M.—S. Tablespoonful every two hours.

As a Hypnotic:

R.—Resorcini resubl. gr. viiss.
M. ft. pulv. No. x.
S. One powder in water before retiring.

For Diarrhœa in Children :

R.—Solut. resorcini resubl. gr. ivss—gr. viiss : 3viss.
 • Tr. opii. gr. viiss.
 Tr. ignat. amara. gr. xv.
 Syr. 3v.

M.—S. Tablespoonful every two hours.

For Carcinoma of the Stomach :

R.—Decoct. condurango 3iij, gr. vl : 3v, 3v.
 Tr. rhei vinos. 3j, gr. xv.
 Resorcini resubl. gr. xxx.
 Syr. cort. aurant. 3v.

M.—S. Tablespoonful every two hours.

For Stomachic Affections of Adults with Diarrhœa ; Peritonitis ; Vomiting of Pregnancy :

R.—Sol. resorcini resubl. gr. xxx : 3v, 3v.
 Tr. opii. gr. xxx.
 Tr. ignat. amara 3j, gr. xv.
 Syr. 3v.

M.—S. Tablespoonful every two hours.

—Menche, in *Centralblatt f. Klin. Med.*

Medical News and Miscellany.

DR. JOSEPH LEIDY has removed to 233 South Thirteenth street, below Locust, Philadelphia.

NATIONAL ASSOCIATION OF MILITARY SURGEONS.—At the meeting of this Association at Chicago, September 18, the following were elected officers :

Gen. N. Senn, President ; Maj. Nelson H. Henry, of New York, First Vice-President ; Col. E. Chancellor, of Missouri, Second Vice-President ; Col. Matthews, of Illinois, Secretary ; Lieut. Ralph Chandler, Corresponding Secretary ; and Col. T. T. Crane, of Colorado, Treasurer.

St. Louis was selected as the next place of meeting.

HOSPITAL ELECTIONS.—At the Melbourne Hospital, Victoria, the Governors every now and then amuse themselves with a general re-election of the entire staff. Then woe be to him who by carelessness or inadvertence—or even in the honest and fearless performance of his duties—has come into collision with any number of the subscribers ! We have been favored with the following cutting from a private letter just received from Melbourne : “ Our horrible popular hospital election is just upon us again, touting, canvassing, cards, circulars, making votes, buying votes, etc.—Hideous ! ” Melbourne is a young city.

RACHEL COLLEGE OF OBSTETRICS AND NURSING, OF ST. LOUIS.—This institution which, several weeks ago we were informed, was in the advanced stages of gestation, has at full term achieved the status of independent existence, and, like the goddess Minerva, is fully equipped with competent instructors for supplying “ one of those long-felt wants,” and worthily so, for “ it is instituted for the purpose of affording facilities for the education and training of women in the science and practice of obstetrics and nursing.” The specified objects are laudable, and the mode of their attainment feasible. A corps of women properly educated for a vocation which involves, ’tis said, “ more than two-thirds of the obstetric practice of the country ” cannot fail to enure to the greater safety to both mother and child.

Preliminary course commenced September 14, 1891. The commodious mansion, No. 1414 Lucas place, has been secured for the college building.

—*Weekly Med. Review.*

THE peach was originally a very poisonous fruit, but by cultivation the poison has disappeared.

WEEKLY Report of Interments in Philadelphia, from September 19 to September 26, 1891 :

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess.....		1	Inflammation bladder.....	1	
Alcoholism.....	4		“ brain.....		13
Apoplexy.....	9	1	“ bronchi.....	2	2
Bright's disease.....	8		“ kidneys.....	2	
Cancer.....	12		“ larynx.....		3
Casualties.....	11	2	“ lungs.....	12	4
Congestion of the brain.....	2		“ pericardium.....	3	1
“ “ lungs.....	2		“ peritoneum.....	5	
Cholera infantum.....	36		“ pleura.....		2
“ morbus.....	1		“ s. & bowels.....	3	2
Consumption of the lungs.....	31	4	“ tonsils.....		1
“ throat.....	1		Malformation.....		3
Convulsions.....	13		Marasmus.....		28
Croup.....	7		Old age.....	14	
Cyanosis.....	2		Paralysis.....	6	1
Debility.....	3	8	Purpura hemorrhagica.....		1
Diarrhœa.....	3		Pyæmia.....		
Diphtheria.....	12		Shock, surgical.....	1	
Disease of the heart.....	12	1	Softening of the brain.....	1	
Drowned.....	3		Suicide.....	2	
Dropsy.....	3		Syphilis.....		1
Dysentery.....	1	3	Tabes Mesenterica.....		1
Fatty degeneration of the heart.....	1		Teething.....		2
Fever, scarlet.....	4		Tetanus.....		1
“ typhoid.....	10	4	Tumor.....	2	
Gangrene.....	1		Ulceration of the stomach.....	1	
Hernia.....	1	1	Uremia.....	2	
Homicide.....	1		Whooping cough.....		5
Inanition.....	1				
Influenza.....	1	15	Total.....	173	196

It has been decided by the joint committee appointed by the following societies, to hold a union meeting of the North Western, the North Eastern, and the North Central Ohio Medical Societies, at Mansfield, O., on Thursday, Friday, and Saturday, November 5, 6, and 7.

On Thursday evening the members will be entertained by a reception given in honor of the association by the Hon. John Sherman, and on Friday evening by a reception given by the Hon. M. D. Harter. Every arrangement has been made to make this meeting a pleasant and profitable one, and we trust that a full attendance may be had.

Ample hotel accommodations will be arranged for ; and an effort will be made to secure reduced rates on all the railroads of Ohio.

The following Committee of Arrangements has been appointed : Dr. R. Harvey Reed, Dr. J. W. Craig, and Dr. Geo. Mitchell, all of Mansfield.

THE rapidly increasing urban population of the United States has led to a corresponding development of health resorts of all descriptions—seaside, mountain summits, mineral springs. Our fast living, overworked city people need a change, and will have it, during the long, hot summer months. The great railway systems do all in their power to facilitate this change. Hence the two Virginias, New York, New Hampshire, Arkansas, annually reap enormous sums by means of their mountains and waters. The sea-coasts of New England are a mine of wealth to the States having good beaches for bathing.

Tennessee, in its great extent and variety of mountains, and in its mineral waters, has a source of wealth and fame hitherto but little appreciated. The four rapidly growing cities of this State alone annually send out many thousands in search of pure air and recreation. The immense cotton regions to the south and west of our borders furnish perhaps an equal contingent. The Tennessee resorts ought to be the preference of a large majority from these quarters.

—*Tennessee State Board of Health Bulletin.*

DR. Y.: "You, sir, why you prostitute your position as a member of a noble and honorable profession by encouraging the drinking propensities of the people, filling our prisons and workhouses by your vile principles, sending the loveliest of our young women to a life of shame, enticing our young men from their ginger-beer and hymn-books—yes, sir, you do. I saw a prescription of yours only yesterday for a child, an infant, sir—three minims of vin. ipec. to the dose—three drops of 'death in the pot,' minim measure, I mean. Yah! you wicked man, keep your temper, will you, if you are sober. Bah! you smell of sp. eth. nit."

DR. X.: "Sir, you misquote Scripture; I'll none of ye!"—*Hosp. Gaz.*

ACCORDING to *The Country Doctor*, "A physician's bill is a debt of honor. Bankruptcy can not affect the obligation. The grocer and dry goods merchant may be put off a little, but the physician is more than tea and sugar, coffee and calico. He attends at all seasons and all hours; he adds his sympathies and interests; he bears a part of the anxieties in the trying moments, and advises at all times in pain and peril."

The above, which we clip from an exchange, is remarkable for both truth and fashood. As a mere abstract proposition it is true as Holy Writ. But as a statement of real practical every-day facts, it is as false as a fashionable woman's bust. In real life, the grocer, butcher, dry goods man, patent medicine vender, and in fact everybody else, are paid first; if there is anything left the doctor stands a chance at it—provided the circus don't come along.—*Ex.*

MEDICAL PRACTICE IN CONNECTICUT.—The following reply was sent to a doctor inquiring of a State official if he will be allowed to practice in Connecticut by registering his name and the college from which he was graduated:

"SIR:—Anybody can practice medicine in Connecticut. You do not need to register; you do not need a medical diploma; you do not need to know the difference between opium and peppermint; you do not, indeed, need to know anything. You can simply come and live here and begin to practice. The laws of Connecticut will sustain you in collecting your fees for professional services, if you render any which you choose to call such. But if you undertake to carry me or my trunk to the depot for pay, you must get a license. If you peddle matches or peanuts, you must get a license. If you collect the swill from your neighbors to feed your pigs, you must get a license. If you want to empty your cesspool, you must get a license. But you can practice medicine in Connecticut *without a license.*"—*Hartford Post.*

AN incident strangely characteristic of epidemics in India occurred during the recent outbreak of cholera in Rungpur. The measure adopted by the medical authorities were already bearing fruit in a sensible diminution of mortality, and the people were beginning to appreciate the value of the rules which had been issued for their guidance when a number of quacks, termed "ojhas," alarmed probably at the falling off in their profits, made a concerted attempt to defeat the efforts of Government. Under the pretext of exorcising the cholera demon, they levied a fee of one rupee in every household, while they personated the "demon" at night, prowling with torches on the outskirts of the villages, and terrifying the simple natives by the utterance of the most hideous

yells. They succeeded, further, in spreading a report that the recent census had proved the country to be over-populated, and that the Government doctors had consequently been sent down to poison a certain number of the inhabitants. The result of these rumors was so disastrous that in many districts the people deserted their villages and fled to the jungle, and the local authorities experienced the utmost difficulty in persuading them to return.—*Indian Med. Gazette.*

PECULIAR FISH POISONING CASES.—"Medicus" (Birmingham) reports the following:—On August 23, Sunday morning, about 7 A. M., I received an urgent message to go to see a family who had been poisoned. I hastened to the place and found husband, age thirty-six; wife, age thirty-four; child, age twelve; baby, age ten months, all in a semi-comatose state. Their temperatures were sub-normal; pupils dilated; very thready pulses; and the whole of them suffering from sickness; cramp in the bowels. On making inquiries I found that on the Saturday evening they had had a meal of halibut liver, fried. I saw some of the same, and it appeared perfectly fresh and sweet. I saw them several times during the day, and prescribed stimulants, and am pleased to say that they all recovered in the course of a week. Since attending the patients referred to above, I have heard that other persons have been poisoned by the same kind of fish, bought at the same shop on the same day.

—*Hospital Gazette.*

POPULATION OF THE UNITED STATES IN ACCORDANCE WITH ALTITUDE.—Mr. Henry Gannett, the Geographer of the Census Office, has prepared a report on the distribution of the population in the United States according to altitude, from which it appears that about one-sixth of the population live less than 100 feet above sea-level—namely, along the immediate sea-board and in the swampy and alluvial regions of the South, and that more than three-fourths live below 1,000 feet, while below 5,000 feet are found nearly 99 per cent. of the inhabitants. At great altitudes there are found only the most trifling proportion. In the area below 500 feet is included nearly all that part of the population which is engaged in manufacturing and in the foreign commerce of the country, and most of that engaged in the culture of cotton, rice, and sugar. The interval between the 500 feet and 1,500 feet contours comprises the greater part of the prairie States and the grain-producing States of the northwest. East of the 98th meridian the contour of 1,500 feet is practically the upper limit of population, all the country lying above that elevation being mountainous. The population between 2,000 feet and 5,000 feet is found mainly on the slope of the great Western plains. In this region the belt between 2,000 feet and 3,000 feet is almost everywhere the debatable ground between the arid region of the Cordilleran plateau and the humid region of the Mississippi Valley. Above 3,000 feet irrigation is almost universally necessary for success in agricultural operations. Between 4,000 feet and 5,000 feet, and more markedly between 5,000 feet and 6,000 feet, it will be noticed that the population is decidedly in excess of the grade or grades below it. This is mainly due to the fact that the densest settlement at high altitudes in the Cordilleran region is at the eastern base of the Rocky Mountains and in the valleys about Great Salt Lake, which regions lie between 4,000 feet and 6,000 feet. Of these the extensive settlements at the base of the mountains in Colorado are mainly between 5,000 feet and 6,000 feet. Above 6,000 feet the popu-

lation, which is confined to the Cordilleran region, is almost entirely engaged in the pursuit of mining, and the greater part of it is located in Colorado, New Mexico, Nevada, and California. While the population is increasing numerically in all altitudes, its relative movement is decidedly toward the region of greater altitudes, and is most marked in the country lying between 1,000 feet and 6,000 feet above the sea. The density of population is greatest near sea-level in that narrow strip along the sea-board which contains our great seaports. The density diminishes gradually and rather uniformly up to 2,000 feet, where the population becomes quite sparse. The average elevation of the United States, excluding Alaska, is about 2,500 feet. The average elevation at which the inhabitants lived, taking cognizance of their distribution, was 687 feet in 1870; in 1880 it had increased to 739 feet; and in 1890 to 788 feet.

THE typhoid fever epidemic in Newark, N. J., is another example of official obtuseness and negligence, and of inexplicable willingness of the people to imbibe the filthiest of all filth with their drinking-water. It matters not whether such filth is supplied to wells from the soakage of privy vaults in proximity with them—the process common to villages round about—or discharge into the reservoirs or rivers from which the drinking-water is obtained, its character is the same.

But the Passaic river is well-known to have served the double purpose of being the common receptacle of the sewage, and the source of the potable water of one hundred thousand people, more or less, for many years. These people seem to have been waiting for that degree of filth saturation above stated by Dr. Balch, who, from his official capacity for several years as the executive officer of the State Board of Health, and also Health Officer of Albany (where the people have been drinking the sewage of Troy until Albany has become celebrated as a fever hatchery), and the knowledge he has acquired by the let-alone policy of the State Board in regard to the Croton, is evidently qualified to speak with authority upon the subject.

Yet there are said to be some people, and among them even some physicians, who still hold to the fatal fallacy of the late Dr. Letheby, Medical Officer of Health of London, about twenty five years ago, that "sewage when it is mixed with twenty times its volume of running water, and has flowed a distance of ten or twelve miles, is absolutely destroyed; the agents of destruction being infusorial animals, aquatic plants and fish, and chemical oxidation." This theory appears to have been based upon Dr. Letheby's inability to detect the sewage under such circumstances, hence he believed in its total destruction, notwithstanding abundant evidence adduced of the prevalence of cholera and typhoid fever among persons who drank such water. He had more faith in his chemical tests and microscopes than in the fatal results. Unfortunately, Dr. Letheby's theory appears to have been accepted by Prof. Chandler, of New York. It was on his judgment that the people of Albany consented to drink the sewage of Troy; and it has been through faith in his analyses and judgment that the Croton and Hudson have been held up as examples of purity, notwithstanding the amount of filth constantly poured into them, as well as the Passaic, and the high rate of mortality from intestinal diseases among those who have used these waters, that cannot otherwise be accounted for.

—*The Sanitarian.*

HOLIDAY COLONIES IN SPAIN.—Spain is following the example of other countries in organizing "colonies" of poor children who are sent to the country for some weeks in the summer. The fifth "colony" of children from the public schools of Madrid, was recently sent to San Vicente de la Barquera. The Queen Regent has again given 1,000 pesetas and the Provincial Council 500 pesetas to the fund. The number of children sent to the country this year is thirty-eight, which is considerably larger than in any previous year. For the first time, also this year, the "colony" includes a contingent of little girls. The "colony" is under the charge of Don Ricardo Rubio, Secretary of the Museo Pedagogico, which is the organizing agency of the movement, together with two masters and as many mistresses. Possibly some may think the latter estimable persons might with advantage have been left behind; for is not the schoolmaster—like the world, according to Wordsworth—just a little "too much with us?"

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending September 26, 1891.

MARSTELLER, E. H., Passed Assistant-Surgeon. Detached from U. S. S. "Petrel," and granted one month's leave.

NORTON, O. D., Passed Assistant-Surgeon. Detached from special duty Naval Academy, and to the U. S. S. "Petrel."

HALL, J. H., Surgeon. Detached from Naval Hospital, Chelsea, Mass., and placed on waiting orders.

BRADLEY, G. P., Surgeon. Ordered to Naval Hospital, Chelsea, Mass.

GRAVATT, C. U., Surgeon. Ordered to Naval Hospital, Brooklyn, N. Y.

GARDNER, J. F., Passed Assistant-Surgeon. Detached from Naval Hospital, New York, and to the Naval Station, New London, Conn.

NORTH, J. H., Assistant-Surgeon. Detached from Navy Yard, New York, and wait orders.

LUNG, GEO. A., Assistant-Surgeon. Detached from Naval Station, New London, Conn., and to the Navy Yard, New York.

SIMONS, M. H., Surgeon. Detached from the "Enterprise," and to hold himself in readiness for sea service.

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Clinical Lectures.

MIGRAINE; CLINICAL REMARKS ON HEADACHE.

By FRANK WOODBURY, M.D.,

Honorary Professor of Clinical Medicine at the Medico Chirurgical College of Philadelphia, etc.

SEVERE, more or less persistent, headache in a young man, or one at the prime of life, is often associated with syphilitic infection arising from a gumma or syphilitic meningitis. Another cause of common occurrence is chronic meningitis, due to insolation, or to a local congestion remaining after sun-stroke. Such patients are liable, on exposure to the sun, even at ordinary temperatures, to have attacks of severe disabling headache. The next most frequent cause is migraine, or hemicrania, of which the present case is an illustration.

Although in the characteristic form of migraine the pain is confined to one side of the head, yet very frequently it is dull and diffused, and the patient is unable to localize it, or it may extend all over the head, although worse on one side. As you well know, headaches are also often caused by eye-strain and by nasal catarrh.

Migraine is common in young people of nervous temperament, being especially liable to come on when they are overworked. The attacks often commence with some disturbance of vision, hemiopia, or more properly hemianopsia. The patient, looking at his face in a looking glass, or at anything immediately in front, will be able to see only one vertical half of the object. One-half of the retina being rendered insensible in each eye, so that we have the inner half of the right eye and the outer half of the left eye insensitve, or vice versa. When this is the case, only one-half of an object is seen if looked at directly in front. Other patients have spots before the eye, or

they complain of weakness in vision. If they try to read the letters become blurred, or slight effort in reading brings on headache. This hemicrania comes on often, following indiscretion in diet; certain articles cannot be eaten without having an attack. I have known of cases where it was due to excessive taking of tea, or indulgence in a small amount of cheese. In others it is produced by greasy articles of food. In such attacks the patient generally wakes up in the morning feeling poorly, and unable to eat much breakfast, and either before, or shortly after breakfast, a dull pain commences in the head, which gets worse and worse during the day, and with it is associated a great deal of depression of the body, and physical powers and digestion seems to be entirely suspended, or to go on very imperfectly. Some time in the afternoon or evening the stomach rejects the food taken during the day, and, perhaps, the day before as well, showing that digestion has been interfered with from want of nervous supply. On account of the prostration the patient is generally obliged to lie down and discontinue all brain work, as well as physical labor.

These nerve storms are of two kinds. In one the face is congested; in the other case the patient's face is unnaturally pallid. In one case it will suggest to us that the blood supply of the brain is sufficient but irregularly distributed, and in the other case it looks as if the blood supply to the head was inadequate. In the first case the anæmia would be only local; in certain centers, or in one hemisphere, or in the course of one artery, while in the other case it would be general in all the great nerve centers.

After such a nerve storm the patient will rest for an hour or two, and after emptying the stomach, generally recovers in a short time, except for a slight weakness which disappears by the next day.

These attacks, as I have already told you, are brought on partly by indiscretion in eating, and partly

by mental work. Not always does the same article of food bring on an attack in different patients. The impaired nerve power so weakens the digestion that even ordinary articles of food are not digested.

In the treatment of this affection we must advise the patient to abstain from food which does not agree with him. As the blood supply to the brain is defective in these cases, some stimulant, such as hot whiskey, or alcohol, will often help to prevent an attack which is coming on. In other cases coffee combined with the whiskey will help, or caffeine given alone. If any undigested food remains in the stomach it will be well to give an emetic and wash out the stomach with hot water. Where the patient is well nourished, and able to take opium, the following may be given :

R.—Tr. opii deodoratæ..... gtt. x or xij.

(Tr. cannabis indica may be substituted when opium is considered objectionable.)

Potassii bromidi..... gr. xx,

with two drachms of camphor water. In addition, give some cinnamon or peppermint water to disguise the taste of the combination.

We do not, as a rule, combine anything sweet with bromide of potassium, on account of its salt taste. Antipyrin in gr. x-xv doses also will relieve headache, but is often followed by great depression, or even collapse.

Such a dose, taken and repeated every two hours, will generally ameliorate an attack, and enable the patient to keep on his feet and do a certain amount of work.

As to the treatment between the attacks it is possible this deranged blood supply may be due to some poisonous product circulating in the blood, the result, perhaps, of infectious dyspepsia and butyric or lactic acid fermentation, to the products of which when carried to the nerve centers this attack may be due. The headache may, on the other hand, be due to defective elimination by the kidneys, or even of some excrementitious matters. In favor of this view is the fact that the kidneys generally act very freely when the attack is passing over, a large amount of limped urine being generally thrown off. Here is a suggestion for our therapeutics, the remedies which increase the eliminative action of the liver and kidneys may prevent recurrence of these attacks. In some cases there may be a congenitally inadequate liver, which, owing to its small size, or some other cause, does not sufficiently purify the blood. It would be well to keep the patient on a vegetable diet in these cases, in addition to paying proper attention to the secretions.

When the kidneys are at fault and acting scantily, diuretics, citrate of caffeine, gr. j or ij, given three times a day, will do well, or it may be combined with gr. xx of acetate of potash given at night. Sweet spirits of nitre, or hot lemonade, with a teaspoonful of gin or whiskey at bedtime, are also good adjuvants.

When the liver is constantly deficient in its secreting power, succinate of soda in two-grain doses, several times a day, has been used with success, but probably the use of the podophyllin, leptandrin, cascara, and similar cholagogues will prove all that is necessary, if given regularly, with due regulation of the diet.

Such patients should pay especial attention to the functions of the skin, by frequent warm bathing or sponging, and wearing woolen, or silk underclothing.

The Columbus Medical Journal reports several cases of poisoning, supposed to be caused by eating wild parsnips, but really due to the *cicuta maculata* or *c. virosa*.

EPITHELIOMA OF THE ANTRUM.

REMOVAL OF SUPERIOR MAXILLARY BONE.

By ERNEST LAPLACE, M. D.

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WE are about to remove the upper jaw from an old woman seventy-six years of age. This operation was first performed in 1825 by Gensoul, a Frenchman. You all know what the causes are, for which removal of the upper jaw is demanded. In nine-tenth of the cases the cause is a foreign growth, a new growth, a neoplasm, which starts from the mucous membrane lining that cavity in the upper jaw called the antrum. This mucous membrane is the same as that to be found elsewhere, and just as all growths starting from a mucous membrane are at least at first bound to be of an epithelial nature, so is this neoplasm epithelial in the beginning; secondarily, when these cells have infiltrated the submucous cellular tissue, when the fibrous tissue beneath has become infected, a new character is added to the growth. We have a right to think, from its analogy to tuberculosis, the cause of which is a micro-organism, that the cause of cancer might also be micro-organism. When this enters the fibrous tissue it is also reproduced, thus we are likely to have evidence of a fibrous growth mixed with an epithelial growth; hence the diversity of opinion when we are called upon to diagnose these conditions.

Here you will see a tumor which started in the superior maxillary bone, and gradually filled, distended and burst the bone. Just as you know anatomists fill the skull with green peas, wet them and allow them to burst the skull, so these cells spreading rapidly, filled this cavity and broke it open, at the same time disintegrating the bone. Now we are called upon to diagnose the nature of the tumor. Where did it start? From within the antrum of Highmore, which is lined by mucous membrane, hence at first, if not at present, every particle of the growth was epithelial in its nature. However, since then it has pervaded and infected the surrounding tissues, and that is the reason why in most books, you find these tumors described as osteosarcomatous. Now both portions of that name are wrong, "oste" is wrong, inasmuch as the bone itself does not constitute an integral portion of the growth; secondarily, some portions of the bone are bound to be mixed up with the tumor. "Sarcomatous" is wrong, because the sarcomatous portion only enters its composition after the tumor has started. However, no matter by what name we call it, we should have an understanding as to what the tumor is, how it grows and what it becomes. Therefore, let us have it clearly before us that this tumor starts generally in the antrum, which is lined with mucous membrane, and any growth which starts from that surface must be epithelial. As it infiltrates the fibrous tissue below, becomes infected and so we have the sarcomatous element of the tumor.

Now in removing this tumor, especially from children and old people, we have great risks to run. It is exceedingly bloody and excites a great deal of shock, therefore we must proceed rapidly and remove as much as we can, hoping that the hemorrhage will not be more severe than the patient can bare.

I do not perform this operation as a matter of choice, but am forced to do it; the patient insists on its being done. On my telling her there are a few chances of recovery, she says she would rather die than remain as she is.

The incision that will be practised is the one introduced by Heath, an English surgeon. It seems to me the one that gives the best view of the parts. We will begin near the outer canthus of the eye; following the floor of the orbit, bring it to the nose, down the side of the nose to the middle of the lip, cutting through the whole structure.

Having done so, remove the whole flap to one side and that will give us a view of the upper jaw.

The soft parts having been liberated and the tumor exposed, our next purpose is to separate the upper jaw. That is performed by three separate acts. The first one is to separate the zygoma. This is done by introducing a chain saw through the sphenomaxillary fissure below the zygoma, and sawing directly through the attachment of the malar bone to the superior maxillary. The second cut will be by introducing the forceps directly into the nostril and in an upward and outward direction, cutting in a line drawn from the nostril to the floor of the orbit. The third cut will be through the roof of the mouth (the hard palate) by placing one blade of the forceps in the nostril and the other in the mouth. Then grasp the bone with the lion-tooth forceps and twist, first from side to side and then out.

That would be a typical method of removing the bone; but, unfortunately, I do not think it would be so easy in this case, as the bone has been destroyed and cannot be removed in its integrity. We will remove it piecemeal, inasmuch as it has been pushed apart by the growth. The bone thus being removed, we examine the cavity. We now use a curette to remove the cancerous granulations. That being done, we pack the cavity full of iodoform gauze and so accomplish hæmostasis and disinfection. We will leave the wound thus for two or three days and dress it after that length of time.

We would have much preferred to deal with this case at an earlier stage of the disease, as you will observe the skin on the surface is almost ulcerated through, so that we scarcely hope to be able to save a flap in order to close the gaping wound.

One of the dangers of this operation is that of blood getting into the trachea. Simple elevation of the head, without elevation of the shoulders will prevent this. Formerly, surgeons resorted to preliminary tracheotomy to attain this end.

Original Articles.

WHAT A GENERAL PRACTITIONER CAN DO WITH ELECTRICITY.¹

By WILLIAM F. HUTCHINSON, M.D.,

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I HAVE written this paper with pleasure. It will be listened to by an audience composed of men who know how such things are from experience; and in such presence there will be no need to stop at every sentence to explain the rationale of each statement.

Reading upon this subject before a general audience, I have often found a thankless task. My hearers were either mildly incredulous, actively combative, or aggressively doubtful; and, in every instance, over what they were usually ignorant of.

Their own experiences, accompanied by lack of results, had taught them that the therapeutic value

of electricity is nil; and, armed with this dogmatic incredulity, they scorned any statement, however modest, that seemed to impugn it.

It was their little knowledge that made them wondrous wise. From such sentiments my present audience is happily free, and I address you with that confidence which is born of the certainty that you know whereof I speak.

It is eminently proper that words of suggestion or of warning should go out from this association to our brethren through the land; for we have already collected in our ranks men whose names are synonymous with most that is known of electro-therapeutics—whose debates will be read with interest everywhere, and whose announcements of results attained may not be doubted.

Such statements will have the society stamp of authority.

And they will reach eager pupils. During the long time that I have devoted to the special practice of electro-therapeutics, a great number of letters have come to me asking for information respecting the proper use of electricity in a variety of cases, and replies have been acknowledged in a manner that showed interest and careful attention. In the various scientific societies before which I have spoken on this subject, there has been a respect accorded and an amount of keen interest shown that has convinced me that the thinking part of our people believe that the time has come for the employment of electric energy in treatment of disease to as full an extent as the most radical specialist could desire. And I believe that the majority of the profession agree in using it as far as they can safely, and will welcome all information from respectable sources that may aid them to do so.

Our medical men are among the shrewdest of Americans. They know that the age demands increased capacity for production, and better goods from them, as from all others; and, since their merchandise is health public and private—most precious desired of all products, it looks to them with vigilance to neglect no means to provide it as perfectly as possible.

They are aware, these Yankee doctors, that among means to this end the employment of electric energy has stepped to the front, and that, more and more each year, its use at their hands is demanded by the people.

They are so completely convinced of this that I believe it to be nearly impossible to find a physician's office unprovided with some form of electrical machine.

A gentleman nearly connected with Mr. Edison's great manufactory lately said to me, while showing his new family faradic machine, and explaining its availability for medical men, "I doubt if you have any idea how many of these instruments are sold. The number that we turn out annually runs into the thousands, and we are just beginning to cater to the profession."

They are found, not only in physicians' offices, but thousands are purchased every year by confiding heads of families, who are led to believe that electricity is of the nature of a non-intoxicating cocktail, to be taken at any and all times, irrespective of actual need.

But among the profession at large, knowledge of electro-therapeutics is increasing, and much more intelligent study is now given to this branch of science than ever before; and yet, in the nature of things, it is improbable that general practitioners

¹ Read before the American Electro-Therapeutical Association, September 24, 1891.

will ever care to advance in our special study much farther than its alphabet. Their time is too much occupied to devote to a single branch that demands so much of it, and spare cash is rarely sufficient to invest a great deal in complicated and expensive instruments that need constant care. They are learning that after they have purchased and installed a fine set of electrical machinery, something is still lacking, and that is, the manual expertness coming from constant use and judgment in choice of current that is born of long experience in electro-physics. In many cases they are conscientious enough to ask information in a doubtful case; but in many more they throw the electrodes down with an impatient "Pshaw; I told you that electricity was no good!"

I heartily agree with my friend, the editor of the *Journal of Balneology*, and venture to quote a few lines from his August number, only changing a single word. "If, however, we would place the study of electro-therapeutics on a sound scientific basis, we must go to the root of the matter and teach our students in our medical schools the principles underlying this method of treatment. The establishment of a chair of electro-therapeutics in our leading universities, or a special course of lectures on this subject, will go far to convince medical men of its importance, and act as an incentive to its investigation."

And so I proceed to my suggestions. First, as to choice of instruments. Much handling of many kinds has taught me to avoid sedulously all prettily finished boxes whose contents are hermetically sealed, which must be returned to the manufacturer when repairs or re-charging is needed. My advice is not to buy any form of galvanic cell unless every part is easily inspected, readily understood and quickly repairable without expert aid. All good makers now supply hydrostats that will keep fluid in, and so-called dry cells are only dry because they are fluid tight.

Up to the present, I believe that some form of Grenet cell is the best for portable use that a general practitioner can purchase. It is reliable when cared for, quickly repaired when out of gear, and any of its parts may be replaced by any one in a few minutes at a trifling expense. A few days ago, I went a hundred miles into the country to consult with a bright modern doctor. When I called for a galvanic battery to help the diagnosis, he brought me a handsome box containing fifty closed cells that he had bought a month before. Much to his disgust, when the circuit was closed, there was no current, nor could our united endeavors get any. If that battery had been a series of open Grenet cells, how easily we should have found the defect and remedied it!

Twenty such cells will be found sufficient for all ordinary uses. They will give, say 24 volts. E. M. F., and with 100 ohms resistance, about 30 m. a., current enough for usual work, including such minor surgery as naevi, urethral strictures, removal of superfluous hairs etc., where there is practically no resistance.

For office purposes, where maximum of life and minimum of trouble are requisites, I have not found anything equal to the new Edison cell, marked type "C" in his catalogue. It is neat, as cheap as any other, has a life of fifty ampere hours, which means a year's work for a general practitioner, may be repaired by any one, and has that most valuable of all qualities, it will stay. In other words, it will give the same voltage, about seven-tenths volt per cell, as long as any part of the elements remains. It does not commence work with one volt per cell and slide steadily

down to nothing, as every variety of Leclanche cells does; one may always depend upon it.

Twenty-five of these, at a cost of \$32.50, less discount, will prove sufficient for all general work.

For a faradic machine, I should advise a good DuBois Reymond coil, with two Grenet cells in the box. One of them will be enough for ordinary work, but in asphyxia from inhalation of gas, in drowning cases, and especially in opium narcosis a second cell is necessary, as the treatment may be protracted for hours. In one of my recent cases, I exhausted four Flemming cells before the patient was out of danger.

I am not in favor of fancy attachments on the little table. Slow vibrating hammers, rows of shining buttons, many switch levers, etc., tend to confuse the busy doctor, and unsettle his confidence in his machine, at a time, perhaps, when instant action is imperative. A single pair of posts for electrode cords and a cut off switch are all, in my opinion, that are needed.

I regard the faradic coils made by Flemming, of Philadelphia, as the best in the country. They are the perfection of instruments, and the only criticism that I ever heard on them was from my friend Newman: "Splendid," he said, "but expensive."

Well, the best one that he makes costs about \$25.00 and will last a lifetime, surely not very dear.

All instruments must be cared for. With galvanic batteries, it is not asking too much, in the interests of good work, that pairs be removed from acid fluid, rinsed in warm water, and dried before being shut up in their box, perhaps for months. With faradic machines, it is sufficient to empty and wash out the cell once in six months.

I have nothing to say here of static machines, accumulators, nor galvano-caustic batteries, since these are all instruments requiring such skill and technical knowledge to use effectively, cost so much money and demand so much care that their use is likely to be confined to specialists and well equipped hospitals.

Instruments provided, let us see what our doctor can do with them, without other instruction than he can find in books, or more time than his busy days and far from idle nights give him, always bearing in mind how much easier and simpler it is to write a prescription than to make an effective electrical application.

He may treat all functional derangements of special sense, and such forms of their paralysis as depend upon eccentric causes. Facial paralysis, aphonia from cold or sudden fright, tobacco amaurosis, tonic spasm of ocular muscles, hysterical deafness, and the like. These are all usually amenable to faradism, and neither require special skill in application, nor, as a rule, protracted treatment; and he may often obtain results from a single sitting that will astonish and delight him. Any text-book will give the proper technique, and his portable machine will furnish all necessary power.

He may treat certain forms of dyspepsia, dependent upon atony of stomach nerves, and will find in daily faradic applications of slight strength so efficient an aid to diet and ferments that he is not likely to miss using it a second time. I have found the best way in these cases to direct the current from the cerebro-spinal axis to the epigastrium, using large flat sponge electrodes in a recumbent position for five or six minutes daily.

He may cure sexual neurasthenia, meaning thereby that hysterical condition of the genito-urinary tract, which suspends sexual power in the presence of women, and ends in the patient's conviction that he

is impotent. Here I have found it best to alternate faradism and galvanism; the former to stimulate sacral nerves, and the latter to restore tone to erectile muscles. It is best to employ faradic currents of sufficient strength to cause moderate pain, since lighter ones occasionally stimulate the penis to the point of orgasm. Perhaps the best way of making these applications is by means of my penis electrode, a tube of nicked copper, fitted with a plunger and weak spiral spring, which hold a pad of wet absorbent cotton in contact with the glans, and divide the current over the whole organ. The patient is frequently convinced that his case is hopeless, and such conviction is fatal to success. Unremitting, tender care is called for, and with the first firm erection the work is half done.

He may treat peripheral neuralgias from eccentric causes, or such as are confined to nerve trunks. For these I think that he had better employ galvanism, using a low pressure, say eight or ten m. a. in an outward direction, from center to surface.

I believe that it is rare to find that faradism does any good in these cases; indeed, it often aggravates a bearable pain until it becomes intense. It is the sedative, not the stimulant effect of electricity that we need here. Perhaps Radcliffe's plan of application is the best. He says, in his "Dynamics of Nerve and Muscle," "In a case, for example, of cervico-brachial neuralgia, we place the positive pole as near as may be to the origin of an affected nerve; the negative pole is held in the hand of the same side, which is immersed in a basin of warm, salt water. In this basin is another electrode, the wire from which is put in communication with the earth (grounded) most conveniently by putting it in contact with a gas-pipe. Patient and battery must be properly insulated. The result of this arrangement is that free negative electricity is carried off by the earth wire, and the limb remains charged with free positive electricity." I have usually employed this method.

In the neuroses accompanying or perhaps constituting herpes zoster, I have seen the entire trouble disappear in thirty-six hours under galvanic treatment alone. In this disease, I use Walling's foil bandage, which our doctor may easily make by folding tin-foil over a cotton roller in its length, and bandaging the chest therewith in the usual way. Connect the negative pole of a galvanic battery with one end of the bandage, with the positive attached to a broad plate at an indifferent point, and run the pressure up, a little at a time, until a sharp sensation of burning is felt. According to my experience, this will be in the neighborhood of 20 m. a., and should be continued for thirty or forty minutes.

He may cure muscular rheumatism in what appears to the patient to be a marvelous way. I learned from my old tutor, Duchenne de Boulogne, that the skin only must be faradized to cure these pains. This may be thoroughly done by drying and powdering the surface and using a labile current with a warmed, polished metal globe. If any subcutaneous muscle contracts, the treatment is lost and must be repeated after an interval. The current is confined to the skin by using swift, light passes in long sweeps. In this way a current may be made painless that is sharp enough to pierce the skin with crackling snaps and a shower of fine sparks.

He may relieve the neuralgic pains of dysmenorrhœa. In a certain per cent. of cases, these are dependent upon a stenosed canal, when a No. 20 olive tipped bougie, carrying 10 m. a. of negative galvan-

ism, will speedily dilate the stricture and relieve the patient. When the cause is congestion, the same current applied to cervix and upper vagina by a dilating electrode, will effectively attain the same end. So complete is this relief that I have seen more than one woman fall asleep in the operating room during the application.

He may use electricity in cases of suspended animation of newly-born infants. It is far better than artificial respiration effected by the doctor's mouth, and much more agreeable. I think that the best way to apply faradism here is through the medium of a warm bath. One pole may be plunged into the water and the other touched to the skin above the surface.

In this desultory way, gentlemen, I have endeavored to suggest a few of the many things that a general practitioner may do with electricity, and do well, with nothing more than his two instruments and half a dozen electrodes. The list is but a small one, but to extend it in this presence is needless. I have said nothing of electro-surgery nor of electricity in gynecology, not only because there are others present more competent than I to speak upon those subjects, but because I believe that success in both is dependent upon a degree of expertness in manipulation, and an amount of knowledge of electro-physics that no general practitioner will be willing to give sufficient time to attain.

What he may not do, his own good sense and a fair amount of experience will teach him, and what knowledge remains after his experimenting is done, will be likely to imbue him with respect for the science of electro-therapeutics, and for the men who devote themselves to its advancement in the face of factious and determined opposition.

At the close of the paper, Dr. Hutchinson presented to the association a new instrument, suggested by him and made by Sample, called the milliammeter. It combines on a single dial two scales, one measuring 1,000 milliamperes, the other 100 volts, thus enabling the expert, by reversing Ohm's law, to ascertain exactly the resistance of the tissues through which his current is passing. He stated that he is engaged in the study of diagnosing disease by differentiation of electrical resistances, and that, assuming a normal standard, any deviation therefrom plus or minus, would be found to mark a corresponding health displacement, which might be a diagnostic sign. He merely advanced this as a theory and commended its investigation to the Association.

ELECTRICITY IN CARCINOMA.¹

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IT is a very ungrateful task to write a paper on the treatment of cancer, while pessimists insist that cancer is incurable and the profession look with suspicion on any report of a successful case, and still more hazardous to say that electricity has cured; nevertheless, it *has*.

The object of this paper, is to give the different ways in which electricity has been used in the treatment of cancer—to report some cases, and to give the author's experience, with the hope of drawing the attention of electrical experts to this subject,

¹Read before the American Electro-Therapeutic Association at the first annual meeting, held at Philadelphia, September, 1891.

so that some method of treatment may be systematized and adopted, which may lead to progress and greater success with this valuable agent.

While there are on record some cases of unquestionable cure of cancer by electricity, it cannot be denied that many failures have resulted. Cancer patients are fickle and very difficult to manage, and usually come for treatment too late; hence, as a rule, cures are rare by every method.

In electricity no scientific plan has been adopted; unsuitable cases are taken by unqualified practitioners. Sufficient care and patience are not exercised. So much the more reason then for persistent study to find a remedy.

DIFFERENT METHODS OF ELECTRIC APPLICATION IN CANCER.

In the treatment of cancer electricity has been used in various forms, but electrolysis has been most prevalent, and this has been applied in different ways. In considering these different methods, four distinct divisions must be made, viz.:

1. Galvanism.
2. Electrolysis.
3. Galvano-cautery.
4. A combination method of two of the former.

As it is impossible in this paper to go over the whole literature on the subject and to discuss all the theories and cases, a select bibliography is attached, to which the student is referred.

This arranged under different heads is as follows:

A. General remarks, theories, observations, etiology, pathology, and the question, Is a cancer a constitutional or a local disease?

B. On inoculation of cancer and grafting.

C. Treatment of cancer.

C 1. By galvanism.

C 2. By electrolysis.

C 3. By galvano-cautery.

C 4. By a combination of methods.

In considering the four principal applications of electricity in the treatment of cancer, first in order comes—

1. *Galvanism.*

This has been applied externally with pads or sponge electrodes, and (the interrupted current) with needles.

The external application by the galvanic (constant) current with two sponge electrodes to the skin, on or near the tumor, has not met with success, and it seems has only stimulated the cancer cells to greater proliferation, and has thereby hastened the end. The author is not acquainted with a successful case, by external application of galvanism.

The second method, by the interrupted galvanic current with needles, deserves more earnest consideration. It was inaugurated recently by Dr. I. Inglis Parsons, of London, who calls it "The Arrest of Growth in Cancer, by the Interrupted Voltaic Current."

In the annexed bibliography under C 1, much reference is made to the literature of this method. Author had the pleasure of seeing Dr. Parsons at his office last year, during a trip to London, and was kindly shown the instruments and their uses. A galvanic battery with strong currents from 100 to even 600 milliamperes is used. Two needles are inserted, one into the tumor, the other outside of the tumor. Each needle is connected with one pole of the battery. Then a strong interrupted or alternating current is used by causing shocks, and the current is reversed twenty to thirty times in rapid succession. A second or third series of twenty to thirty reversals may fol-

low; the electricity is not allowed to flow in one direction, as the direction of the current is constantly changed. It is immaterial to which pole of the battery the needles are attached. He gives strong currents in some locations of the body; a strength of even 400 to 600 milliamperes is frequently used.

The battery used must have a high electro motive force, capable of sending 500 milliamperes through a resistance of 800 ohms. Dr. Parsons says that his method of treatment is based on the hypothesis. "Cancer consists of new cells which have been formed during the process of repair or inflammation, and in an active state of proliferation have escaped from the control of the nervous system." The deduction to be drawn from this hypothesis is "That, although the cells of cancer multiply more rapidly than those of healthy tissue, the absence of a nerve supply places their vitality, and more especially their recuperative power, on a lower plane than the latter." It will be seen, that in this method, by the sudden reversals of the current, an electrolytic action is impossible, and no chemical decomposition can take place at either pole. For this reason author has classified the Parsons method as *galvanic* in contradistinction to *electrolytic*. By flashing the strong current forward and backward, the intention is to produce a mechanical injury and obliterate the cancer cells without destroying the healthy tissue.

Dr. Parsons is a young and intelligent physician, who, in London Medical Societies, did not pretend to cure cancer, and modestly calls his method "The Arrest of Growth in Cancer." In the meeting of April 11, 1890, he stated that in his first case thus treated, the cancer had not reappeared for one year and eight months. At the same meeting the usual opposition was made by some surgeons (par excellence), who said they preferred a sweeping operation with the knife, and if the tumor reappears, no matter, they cut again. Now the question arises, What will be left of the patient if they keep on cutting, and then have they cured the disease or the patient? Author has been conversant with a case which had been treated temporarily by Dr. Parsons, and thinks it of sufficient interest to briefly relate:

Case: Scirrhus.—Nine operations with the knife; relapse; a hopeless case; much benefited by Parsons' method, and further, also, by electrolysis.

Miss C. N. B., aged thirty-six years, single, had scirrhus of the breast six years ago. Since July, 1886, has been operated on nine times with the knife, by celebrated surgeons in London, Rome and Berne. The disease always returned, and nodules of scirrhus appeared also in other parts of the body, as the other breast, in axilla, neck, etc. The last operation was in October, 1889, when one nodule could not be removed with the knife, because the tumor was imbedded in the jugular vein. Patient went to Dr. Parsons, who applied his own method four times in 1889 and beginning of 1890. April 4, 1890, patient came under my professional care. She had seen some surgeons in New York, who all declared her case hopeless. One surgeon told me that the patient could not live longer than six months, that some bones were carcinomatous and further use of the knife was inadmissible. Nodules were found on the right side in axilla, neck, breast and side below, and connected with the pectoralis. The nodule over clavicle, mentioned above, was imbedded in the jugular and the pulsation of the carotid could be seen and felt.

The galvanic applications by Dr. Parsons were made each time with two needles. From examinations and the statements of the patient herself, there

Is no doubt that Dr. Parsons' treatment benefited her.

From April 19 until June 25 patient was treated at six different times with strong currents of electrolysis; each time being under chloroform; at each séance two of the following gentlemen were present and assisted: Drs. G. C. H. Meier, S. De Wolf Waite and A. Doty. The *modus operandi* was as follows: The positive pole was a wire frame covered with absorbent cotton, dipped in hot water, and placed at the back of the patient on the right side below the scapula. The negative pole consisted of one or two platinum needles, which were plunged into the tumor or a nodule. The strength of the current used varied from 100 to 200 milliamperes, which is much stronger than I generally use. Each séance lasted about fifteen minutes, during which time the needles were used successively in different places; sometimes two needles were used simultaneously in the same or in two different localities. At the first séance one needle was kept five minutes in the nodule above the clavicle, and the next four minutes in a nodule in the axilla. The nodules almost disappeared under the action of the current; the particular nodule near the jugular became hard, and in due time disappeared entirely. The two localities just mentioned were surgically dangerous, and on account of the proximity of the important vessels the knife could not have been used. Patient was much improved in body and mind; the tumors had nearly disappeared. When she first came for treatment her right arm was in a sling, being very painful and useless. Now the pain has disappeared entirely, and she uses that arm just the same as the other healthy member. She enjoyed the summer in Saratoga.

In October two more applications of electrolysis were given, and patient went to the West Indies. In Jamaica, was very sick with dysentery, lost flesh and ran down generally.

March, 1891, returned from Jamaica, a generous diet improved the general health. No return of any visible cancer nodules. Patient was anxious to have more electrolytic treatment, but as there was no particular indication, only one séance was given, and she left for Italy.

Remarks.—This case is interesting in many ways. It was a hopeless case which even the surgeons refused to cut; authorities thought she could live not longer than six months. Nine cutting operations had been performed, and the microscope had settled beyond any doubt that the disease was malignant. The fact is incontrovertible, that the patient left in good spirits and better health one year after she had first applied for treatment. From the beginning of this treatment a cure was not expected or claimed, but the electric treatment certainly did result in much good. Dr. Parsons, in London, was not given time to do much for the patient, but there is no doubt that she was much benefited by his treatment.

2. Treatment by Electrolysis.

In the treatment of cancer by electricity, electrolysis has been mostly used, and is best known. It differs widely from the former method of galvanism, which by a strong mechanical action is expected to destroy the cancer, just as the alternating strong current kills in electrocution. Electrolysis on the other hand either destroys, causing decomposition by its chemical action, or causes absorption according to the strength of the current employed. The art of applying electrolysis successfully consists in using the correct strength of electric current, applying the respective poles in the right place, selecting the size,

shape and material of the electrode, and regulating the duration and intervals of séances.

There are two methods in vogue, one causing destruction the other absorption. A mild current can affect absorption only, a strength from 5 to 30 milliamperes may be used and even more, according to work done. A strong current from 25 and upward to even 200 milliamperes (and some operators have used even more), will destroy tissues to such a degree that the tumor may slough off as a dead mass. A good rule is to apply the current not stronger than necessary to accomplish the object. There is no use in applying 100 milliamperes when 30 will do, and there is danger that a too strong current will even defeat the purpose for which it is given. For electrolysis a galvanic battery must be used. There are two ways of operation: in one, needles are used at both poles; in the other, needles are used at the negative pole only, while a pad moistened with hot water, as the positive pole, is placed on some indifferent part or near the tumor. When needles are used at either pole one or more needles may be inserted at the same time. The best needles for electrolysis are made of platinum, which is the only metal that will not decompose at the positive pole.¹ However, some operators use needles of other metals, as gold, zinc, steel, etc., for which they probably have some reason. The needles ought to be plunged deep into the tissue to avoid the burning or destruction of the cuticle, as well as a running sore at the point of entrance. If the tumor is near the cuticle the current must be regulated so that it will not destroy the integument. No one rule can be laid down for the management of all cases, as varying circumstances will call for a different use of the poles etc., and a good result depends entirely on the intelligent management of each individual case.

Interpolar Action.—It is still undecided whether there is an interpolar electrolysis. Parsons says there is none, while others try to prove the opposite. It is certain that the decomposition by electrolysis is most at and around the termini of the poles, while the molecules flow *between* the poles. If there is an interpolar electrolysis, which is doubtful, it necessarily must be in a lesser degree than at the poles themselves. The knowledge of such facts is very important for the successful treatment of cancer by electricity.

To obtain more knowledge about the electrolytic action, author made some experiments in 1874, which may be summarized as follows:

Experiments I.—Specimen from carcinomatous tumors after their removal by the knife, were subjected to electrolysis. Needles were inserted into the tumor at a distance of one and one-eighth or one and one-quarter inches from each other, and a current of 36 cells of a galvanic battery was used. After ten minutes the hard cancerous mass was softer; bubbles of hydrogen were seen one to one and one-half inches distant from the negative pole, the greatest change took place at the negative pole. Afterwards the microscope found no cancer cell, only fibrine; while the original tumor was pronounced scirrhus by the committee of the New York Pathological Society.

Several other experiments gave the same results, which were, however, verified later by the experiments with specimens from the living body.

Experiments II, January, 1891.—Specimens from the breast of a lady were found scirrhus by micro-

¹Newman: Platinum Needles for Electrolysis, *Journal American Medical Association*, 1891, August 8.

scopical examinations. The tumor on the living patient then was treated by electrolysis, but could not be absorbed. Then the tumor was removed, and in this specimen no cancer cells found. The microscopical examinations were all made by experts, and I have here some slides, which may be examined.

The conclusions are, that electrolysis can destroy cancer cells, and that electrolysis causes specific decomposition at the pole and within a radius of one and one-half inches. Therefore, if needles are inserted in a tumor at a distance of two and one-half inches, it may be expected that the electrolysis acts in such a manner that no interstices are left between the needles, which will retain the life of cancer cells. According to such conclusions, I have operated principally by two methods. If an absorption by electrolysis was intended, the whole tumor was electrolyzed in sections with needles connected with the negative pole, one, two or more needles in the tumor at a time, while the positive pole was applied as a large pad outside, on the cuticle or near the tumor.

The second method is by having needles from both poles, the positive pole (a single needle) in the center of the tumor; the negative needle or needles at the circumference or even outside, but near the margin of the tumor, in the manner and at the distance mentioned before. This was applied for the destruction of the diseased mass, to be sloughed off. In the first method by absorption, weak currents were used and no anæsthetic, as no pain was caused.

Other operators have their own methods which, however, do not differ from the principle and theories here mentioned. From all of which good results and cures have been reported.

Dr. Neftel, who is a pioneer in this electrolytic work, has reported many cures. He believes that electrolysis, besides its local effects, produces also a remote constitutional change; as soon as the protoplasm has by the electrolytic process lost its specific qualities, the cancer is prevented from reproducing itself, and gradually disappears through the process of absorption.

Beard and Rockwell report six cases in "Clinical Researches in Electro-Surgery;" some of which were cured. These are:

1. Epithelioma of lower lip; recovery.
2. Large epithelioma of upper lip; satisfactory healing.
3. Scirrhus of the left breast; complete and instant relief from pain, etc.
4. Scirrhus of the right breast; relieved, but electrolysis with a strong current does not appreciably effect the growth.
5. Scirrhus of the breast; great relief of pain. Death from exhaustion.
6. Epithelial cancer of rectum, etc.; relieved.

Beard once inaugurated his method, which he called working up the case by electrolysis, which consisted in passing two needles from both poles deep in the tissues beneath the tumor. I vide Bibliography C 2.

W. H. Mussey reported, in 1872,¹ a cure by electrolysis, after repeated energetic applications in short intervals.

Dr. Gunning's successful case of cancer of cervix uteri is reported in Grandius' "Practical Treatise on Electricity." He uses one or more needles in the growth as positive pole, and several needles as the negative pole under the growth, with a galvanic current of 150 milliamperes. The aim of his method is to cut off the blood supply from the diseased surface

as to cause it to slough. One year after the operation no return of the disease had taken place.

Dr. Ernest Wende reports cases in the "*Buffalo Medical and Surgical Journal*, December, 1890." His case: III. *Epithelioma of face*, cured by electrolysis, is very interesting, and given here as reported.

W. H. S., a well-known gentleman of this city, for many years court stenographer, and at one time a medical student, first consulted me for malignant disease May 25, 1889. The affection in question was an epithelioma, situated on the side of the nose, in close proximity to the eye, in fact, involving the neighboring parts of both the upper and lower lids. The following is the history and the treatment as addressed to that terrible disease from the time of its first occurrence to the present date, written by the patient himself. I will give verbatim, as there is but little for me to add:

About twenty years ago there first appeared a small growth, in appearance similar to a wart, upon the left side of the nose, at a point about equidistant from the corner of the eye and the ridge of the nose. In the course of a year or so it would occasionally develop a small scab, and upon its being removed either purposely or accidentally there would exude a small quantity of serum. It would then heal up and be scarcely visible for some weeks, and even months. The formation of the scab became more frequent, and the size of the growth gradually became larger. About thirteen years ago I consulted the late Dr. Miner of this city, who advised its removal by the knife. He removed it in that manner. It was done at a time when he was in feeble health, and without an assistant. It bled very profusely, and from subsequent results I am satisfied there was not enough of the tissue removed. However, it healed up, and gave me no more trouble for a year or so, when it began to develop again, and more rapidly than before. I then consulted Dr. Cronyn, who was my family physician, and he advised its removal by erosion, with a sharp spoon. The effect of that treatment was about the same as that given by Dr. Miner. After continuing this treatment for a couple of years, at intervals of from three to six months, he applied a mercurial plaster, but after a few months it returned as before. He advised me to go to the late Dr. Davidson, who was making skin diseases a specialty. He treated it with mild caustics, healing it with a salicylic acid ointment. He continued this treatment for two years and a half, when he informed me that he could do nothing further for it. It had at that time spread, covering a place about five-eighths of an inch across. I then went to a cancer doctor; gave him a history of the case. He predicted that he could cure it in ten weeks, completely. He agreed to charge me nothing unless he effected a complete cure. He applied his cancer plaster on about thirty different occasions, each treatment covering a period of three or four days, and of the most hellish torture possible to imagine. At the end of two years and a half, when the disease had spread until it covered about four times the surface that it did when he began, and extending into the canthus, I bolted. During the last year of his treatment I had been unable to use my eye for any business purpose whatever. I decided it was better to die a natural death, if necessary, from the progress of the disease than to be tortured.

I next consulted Dr. Wende, who began his treatment one year ago last May. His first treatment by electrolysis was so successful that in less than a week the inflammation which had been present in my eye,

¹Transt. Americ. Medical Assoc., 1872, Phila., xxiii., p. 523.

and keeping it nearly closed during the entire time of the cancer doctor's treatment, had almost entirely disappeared. From that day until this I have been able to attend to my business and use my eye daily, and without annoyance. If I was able to endure the treatment without having cocaine injected into the tissues, causing the eye to swell, the effects of the treatment would not be noticeable to the casual observer from any swollen appearance of the eye. When Dr. Wende began his treatment there was over one square inch of surface of open sore, and as much more highly inflamed. At the present time the entire surface actually treated covers less than one eighth of an inch in diameter, and in only three different points.

W. H. S.

In treating the ulceration I first injected a 4 per cent. solution of cocaine in the surrounding and underlying induration, and then with the ordinary iridio-platinum needle destroyed the abnormal tissue with numerous negative galvano-punctures. The insertions were made in various directions, frequently one above the other, and often at right angles with each other. The current that was allowed to pass varied from 5 to 15 milliamperes. I cannot give the exact number of sittings the patient has had, approximately should say about twenty, given at irregular intervals, varying in duration from fifteen to thirty minutes. The infiltration grew gradually less after each treatment. Although not cured, the agonizing pain ceased, and the incessant nervous agitation and distress suspended. However, should I not succeed in entirely removing this dire infection, even in this most promising case, it may be truly said that electrolysis has done more to alleviate the suffering, and more toward affording a most likely means of reaching the cause than the knife or the caustic.

Dr. E. Wende, in a letter sent me September 9, 1891, says: "The case of W. H. S., which I reported, is practically well, and has been for some time. Have sent you photograph of case showing cicatrix.

"Electrolysis is my favorite means of treating an epithelioma, be it large or small. Can produce a record, however, it may appear small, of thirteen cases cured. Have just succeeded in healing a monster, by weekly sittings, after the knife, caustic, and cancer doctors failed. Will also send you a photograph of this patient within a few days."

The photographs of both cases have been received, and are here for your inspection.

The patient represented in the last picture is now seventy-six years old.

Dr. Waite, who is expected to be present, has seen the cases of Dr. Wende, and can affirm the statements made.

Dr. Geo. H. Rohé, of Baltimore, in a private communication of September 22, 1891, writes: "I have treated a considerable number of small epithelial growths by electrolysis, and believe that I have in some cases cut short the malignant tendency in the growth. I would not like, however, to speak of this as curing carcinoma.

"I remember one case, a small pigment sarcoma, growing on the site of a mole, which was removed by electrolysis, and where no recurrence took place in situ. The patient died about a year afterward of apoplexy. Secondary infection of a neighboring gland had occurred, which seemed to be hindered in its progress by percutaneous applications of the current."

Author's Experience with Electrolysis.—Author commenced in 1874 the electrolysis treatment in cancer, and has had considerable experience with these maladies. The results varied; some were failures; some

patients' lives were prolonged, and there were also cures; some patients remaining well without any sign of recurrence of the growth for many years. It would take too much time to relate these cases here in detail, only one case has been published, the specimen being presented to the New York Pathological Society, and examined by the Society's Committee on Microscopy and other experts. Here are some microscopical slides and drawings belonging to this case for the inspection of the members of our association, which has, and still can prove, that the case was carcinoma beyond any doubt.

The case mentioned under the former chapter of the Parsons method was treated by the author entirely by electrolysis, and shows what benefit was given thereby, even in an entirely hopeless case, and it is not the end, as the patient still lives.

A case of epithelioma of the face, treated by electrolysis, in which no recurrence of the disease occurred in seven years, ought to be counted as a cure. An old lady, seventy years old, came under treatment with an epithelioma above the malar bone, one inch below the eye, in October, 1878. During four days of observations the tumor grew visibly larger, so that it was evident there was no time to be lost, electrolysis was used with one needle as negative, inserted in the tumor and a sponge electrode in the hand as positive. My assistant urged an excision, and considered the application of electrolysis useless, as only losing valuable time. The result was, that after a few sittings, the tumor sloughed, and then a rapid recovery took place, so that in due time not even a scar was observable. The patient was seen once a year at least, for seven years until 1885, during which time no new growth re-occurred, and she remained in perfect health, while seventy-six years of age. She has not been seen since. Can any one object that here was not a cure. If so, how many years are wanted without a recurrence of growth, till my fastidious friends will permit it to go on record as a cure?

These cases, among others, are only mentioned in a passing review to show that positive cures can be shown by author, as well as by other operators.

In some cases the malignant tumors were removed with success, but the patients died soon after, from some intercurrent disease, which, however, were not claimed as decided successes or cures. Neither is it denied that failures have often occurred, after very careful treatment. However, the cessation of pain in every case is claimed as a brilliant result of the treatment by electrolysis.

The report of successful cases in detail is reserved for another occasion.

3. *Treatment of Cancer by Galvano-cautery.*

The principal use of this method has been made in amputation by the galvano-caustic wire ecraseur—particularly of the tongue, cervix uteri, and the breast, and also by platinum burners to destroy, or even extirpate smaller growths—successes and failures are of record. Author knows a patient in good health now, 1891, whose cervix uteri was removed in this way by Dr. Noeggerath twenty years ago. Dr. W. E. Stevenson reports in the tabular statements of his work in the St. Bartholomew Hospital, London, cases of epithelioma of vulva, carcinoma of cervix uteri, scirrhus of breast, etc. Time had not elapsed sufficient to express any opinion as to the ultimate result. Dr. J. Byrne, of Brooklyn, seems to have had the most experience with this method in treating malignant tumors of the uterus. He has an experience of twenty-five years, in which he has constructed his own batteries and improved his own method. He removes

the cancerous tissue with the galvano caustic sling, and thoroughly re-cauterizes the surface and the edges of the tissues from which the cancer has been removed. Out of 367 cases thus treated, there was no return of the disease in two to eight years in 153 cases.

The 153 cases heard from and utilized in his tabular statement are divided in four classes, the disease being:

1. In portio vaginalis, 36 cases, no return of growth eight and seven twelfth years in average.
2. In entire cervix, 35 cases, no return of growth five and a half years in average.
3. In corpus uteri, 4 cases relieved for two years.
4. In both body and uterus, 87 cases relieved for three years.

In further explanation of such cases a quotation from Dr. Byrne's letter to author is interesting, he writes as follows:

"The table representing class No. 1 in my paper needs correction to this extent: The number known to have enjoyed exemption from recurrence of disease should be 40 instead of 36, and as 3 more have since turned up, 1 after thirteen years, 1 eleven years, and 1 eight years, an average of the entire 43 cases gives eight year's exemption. This is for cases, when the disease has been supposed to be confined to the portio-vaginalis. In the case operated upon over thirteen years ago, however, there is more enlargement and induration of the submaxillary and cervical glands, which I consider cancerous, but the pelvic organs are so far intact. Such splendid results can only be obtained by strictly following my method of operating. Stewing wet and bleeding tissues by any heated metallic instrument will accomplish but little, and this is the way in which cautery operations are usually conducted. What is wanted is a *deep dry roast*." Author has not been very successful with his galvano-caustic operations in cancer, and all he can claim is to have prolonged life in some, but an immediate relief and the control of hemorrhage in all cases. Once a peculiar method was practised by the galvano-cautery cutting through the superficial tissues, encircling the tumor entirely, making thereby a deep ditch, which separated the healthy tissue from the affected. The intention was to prevent the cancer cells from spreading and retaining the same inside the circle, which was then treated separately, that was a failure; the deep ditch made, was painful, by being denuded of the protecting cutaneous covering. Besides, at the time of this procedure, the disease had already infiltrated many tissues and other organs of the body outside the circle, as stomach and liver; which, however, was not known at the time. It is doubtful if it would have been a success if the cancerous cells were located only in the central tumor.

4. *Treatment by a Combination.*

This consists of an application of two of the former methods, mostly combining the application of the electrolytic and electro-caustic effects of the battery in the same case. It was recommended by E. Noeggerath, in *American Journal of Obstetrics*, N. Y., 1878, Vol. XI, page 136. Many operators have made use of this method, making their own combination. Author had a successful case of keloid in 1878. The tumor was in the arm of a young man, which had reappeared after excision with the knife. The tumor was very hard, but softened after electrolytic action with a platinum needle inserted in tumor as the negative pole. The current was 15 to 20 milliamperes strong, and was applied for fifteen minutes, after the second séance tumor was extirpated with the galvano-cautery. The wound healed slowly, but patient

made a good recovery. As long as patient was heard from, which was several years, the disease did not return.

What constitutes a cure? In discussing this question, it must first be agreed what is considered a cure. A cure is a restoration to health, an elimination of disease. It is perfectly understood that the removal of a malignant tumor does not constitute a cure, but that a reasonable time must have elapsed without a recurrent growth before it can be pronounced a cure. How many years of good health is wanted, without a relapse after operation, before the profession will admit it a cure? To agree on such a time is the difficulty. Supposed a patient is well after the operation for three years, enjoyed good health, has no relapse, and then dies of pneumonia or any other disease or accident, it seems wrong to dispute a cure. It would be well, if the profession would settle this mooted question, and thus prevent disputes about statistics, so that every reporter would know how to make his tables and report cures, benefits, etc., correctly.

Aphorism about cancer theories. There can be no doubt that cancer has been cured by different methods, the knife, electricity or caustic applications, as reported by reliable practitioners. How a cure is effected appears to be simple enough, if the subject cancer could be understood (on which a diversity of opinions has been expressed). At the present day earnest, careful students have made progress, and while there is still doubt about some points, the majority accept certain theories, and a discussion or dissertation is out of place in this paper, general theories only are given from the literature on this subject, and referred to in the Bibliography annexed under "A."

There are several theories about cancer, it may be the result of a special microbe, or an abnormal growth, the result of the action of an irritant or an injury.

There have been different opinions where cancer is a local or a constitutional disease, it may be either, or it may be local at first and later become general or constitutional; an inheritant taint may influence the organization and may develop the disease sooner. The growth of cancer is considered an epithelial growing and spreading in a wrong direction inwards. In epithelioma of the skin it is easy to find cases where the newly-formed epithelium has grown in the *cutis vera* a long distance from its starting point. That carcinoma is the local manifestation of a constitutional disease seems to be improbable. It is a neoplasm. If local in its origin, the treatment must be directed to the arrest of the new growth and the destruction of the cancer cells, at the same time preserving and protecting as much as possible the healthy tissues. Cancers preads by proliferation of the cells, and is carried to other parts of the body by the lymphatic vessels.

Cancer grafting and inoculation. Only recently at the meeting of the Academie de Medecine in Paris, Cornil reported successful grafting of cancer and practised by a medical man, whose name was withheld for obvious reasons. He reported two cases, of which only one has a value for observations and conclusions.

The breast was amputated with the knife, a small piece of the removed tumor was grafted under the skin of the other apparent healthy breast. Two months afterwards at the place where the grafting had taken place a nodule had developed of the size of a hazelnut. This second tumor was then also ex-

tirpated. Both specimens were carefully examined microscopically by Cornil and found malignant, identical in structure. Later the patient died of an inter-current disease. Cornil made a post-mortem very carefully and deliberately examined every structure in the body, as muscles, lymphatics and bones. He did not find any traces of malignant growth or cells. The conclusion would be, that at least in this case the cancer had been exterminated, and therefore that cancer can be cured.

Von Bergman and Hahn, in Berlin, have been accused of grafting cancer in the human subject. No official report has been made about these experiments, for which the excuse has been offered, that it was done in doomed cases, cases beyond the slightest hope of recovery, and entirely for the sake of science. However, such experiment are not new, and have been made before, just as well in animals as in the human subject. References will be found in the annexed Bibliography under "B."

Is cancer curable? If cancer begins as a local neoplasm, the cells of which are all concentrated in one tumor, and such tumor is removed, without leaving any cancer cells behind, the cancer ought to be cured. Neither can any relapse occur, if no cancer cells are left in the body. If, later on, a new cancer develops in the same subject, because there is a new cause for such a consequence, then, such is a new case, and it can not be said that the first case was not cured; however, it would be very difficult to prove either. The difficulty in removing all the cancer cells in any case arises from not being able to locate such cells. If the tumor removed, contains all the malignant matter, the patient is cured; but as such cells often are scattered in the system, distant from the seat of the tumor, which have not been found or discovered by the operator, such cells will proliferate and cause new malignant growths. No wonder, then, that so many failures occur in the treatment of cancer, and that many practitioners do not believe in cures. Nevertheless the many reports of success by reliable men are facts, and prove practically, that cancer is curable, but the condition of a possible success is the entire extirpation of all cancer cells from the body. If electricity can accomplish this, it is preferable to the knife, which always must remove healthy tissue, which is preserved by the use of electricity.

If the theories are true which are found in the literature consulted on this subject, some of which are fortified by practical experience and statistical reports, the following hypothesis may be made (as conclusions).

1. Cancer is the abnormal growth of epithelium inwards (or downwards).
2. It is not proven, that cancer is due to a special microbe.
3. Cancer is a neoplasm, first shown as a local manifestation.
4. It spreads by proliferation of cancer cells.
5. Cancer can be grafted.
6. Cancer can be cured by the total removal of all cancer cells.

In what Manner is Electricity Expected to Cure Cancer?

The entire removal of the cancer cells, ought to cure cancer, no matter what method is used. Now the question arises, How is this effected by the use of electricity? There are several theories and methods.

1. Strong currents of galvanism are expected to destroy the cancer cells by a mechanical action.

2. A removal of cancerous tumors by extirpation (amputation) is effected by the galvano-cautery.

3. Electrolysis by a mild current acts as an absorption by chemical decomposition.

4. Electrolysis with strong currents acts as a destruction. The strong current will destroy the malignant tumor, leaving a dead mass, which will suppurate and finally slough off, leaving a healthy surface, healing by granulations.

Whatever method is used, it must be done thoroughly and systematically, removing all cancerous cells. Success can only be expected in the earlier stages of the disease, when the malady is local and the malignant mass is concentrated in one small tumor. If the cancer cells are dispersed in different parts of the body, scattered, and the disease has advanced, success can not be expected.

The Advantages of Electricity Against other Methods.

1. The facility with which electricity is applied, some methods can be done without an assistant and without an anæsthetic.

2. The operations are free from danger.

3. It causes no shock after the operation.

4. It is easier to get at the whole of the disease in an early stage, than by any other means.

5. It can be used in anatomically dangerous places, beyond the reach of the knife; the horror of the knife is avoided.

6. It delays the growth, prolongs life and benefits the patient, even if it does not always cure.

7. The patient is not necessarily confined to his bed or house.

8. The operation does not cause pyæmia or septiæmia.

9. There is no danger of hemorrhage, but it controls hemorrhage.

10. There is more chance of a cure and better healing after the operation.

11. It *always* allays pain.

In the forgoing article the details of cases have been omitted, it would have made it too long; it has not been written for the general practitioner.

The object was to report the different electric methods which have been used in the treatment of cancer, before the meeting of experts in electricity, for discussion and improvement.

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ASEPSIS IN INTRA-PERITONEAL SURGERY. ABSTRACT.¹

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HE said: I will not discuss the broad question of asepsis versus antiseptics by the use of chemical solutions in its application to general surgery, but if the proper precautions as regards cleanliness in every detail before and during an operation are observed, we need no antiseptic germicides in intra-peritoneal surgery. If solutions of sublimate, carbolic acid, etc., are brought in contact with healthy peritoneum their action is harmful, and if they do not cause immediate bad results they will cause subsequent trouble by so irritating the membrane as to result in few or many adhesions of the abdominal and pelvic viscera. They may leave the patient as much or more of an invalid than before the laparotomy. Nor will I condemn the use of chemical solutions for the purpose of sterilizing the operator, assistants, nurses, or patients, or the room, instruments, sutures, dressings or sponges, if used before the operation is begun, but the chemical germicide should be removed from everything that is brought in contact with the peritoneum. Unless everything is made practically clean, independent of the germicide, it will not make it aseptic. It is too often true that operators who are loudest in advocacy of germicide solutions are the least cleanly, and I have known them to forget to wash their hands before beginning an operation, or before examining a woman in labor. They wet the walls of the room and the hands that have not been cleansed in sublimate solutions, use carbolic spray, put dirty instruments, sponges, sutures, and dressings in dirty vessels filled with unclean water, and expect the antiseptic to make all aseptic. Just here lies a great objection to the general use of chemical germicides and many women have died of septic infection because of reliance upon such means.

There are relatively few men who know how to be surgically clean in every detail connected with intra-peritoneal surgery, and if the time and labor that has been devoted to teaching the medical profession how to use antiseptic germicides, had been directed to teaching the value of and means of accomplishing surgical cleanliness, septic peritonitis following laparotomy would be comparatively infrequent. Of course the above does not apply to all men who use chemical antiseptics, for some of them are the most cleanly men I have seen operate, but I believe they would get as good or better results if they omitted

the antiseptics. The peritoneum is usually infected by contact, and the danger of atmospheric infection is practically *nil*, as has been shown by the excellent results in laparotomies done in large and crowded amphitheatres.

In describing how to be aseptic in laparotomy work he adopted the following order:

1. The operating-room and the room in which the patient is to remain during convalescence.
2. The patient.
3. The operator and all assistants.
4. The kind of water to use.
5. (a) Instruments; (b) sutures and ligatures; (c) sponges; (d) dressings and towels.
6. Irrigation.
7. The drainage tube.

He advocated supra-pubic drainage with a small glass tube with open ends and fine holes on the side extending within from two to three inches of the mouth. This he claimed is sometimes necessary to get efficient drainage in view of the fact, that blood or secretions from tissues above the pelvis do not always by gravitation go into the retro-uterine pouch. He cited an instance where he was unable to get from the tube more than a teaspoonful of liquid until it had been pulled up at least two inches. He then removed a pint. This was within sixteen hours after the operation and the holes in the tube were open. He removes the liquid from the tube by suction and never introduces into it wick or gauze. He has the tube specially manufactured by Messrs. Ford & Co., New York.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

THE most probable explanation of congenital talipes is a cramped position of the foetus, disturbing the proper relation of the bones of the foot.

In performing subcutaneous tenotomy for talipes equinus, insert the tenotomy knife parallel to and immediately in front of the tendo-Achilles, then turn the cutting edge of the knife at right angles to the tendon, and have an assistant put the tendon on the stretch by flexing the foot, when the tendon may be cut with little difficulty. This is not a painful operation; really the only pain consists in passing the knife through the skin.—*Laplace*.

Even without surgical interference, flat-foot tends to relieve itself. If, however, the patient does not want to wait two or three years for the foot to become accustomed to the changed relations between its bones, we may try to restore the parts to their former condition by having an arch made in the patient's shoe, which will force the bones to retain their original relation.—*Laplace*.

Phosphorus favors the growth of bone, and it has been found that patients suffering from fracture recover more rapidly when phosphorus, or some of the compounds of phosphoric acid, are administered. For instance, women during pregnancy have a deficiency of phosphoric acid, so that when there is a fracture, the bones do not readily unite. Phosphate of calcium is very slowly absorbed, and may even form a calculus. We can better administer phosphorus in the form of the hypophosphites. In this form it is more easily absorbed and assimilated, and appears to be non-poisonous.—*Woodbury*.

¹Read before the American Association of Obstetricians and Gynecologists, at the Academy of Medicine, New York, September 18, 1891.

The difference between thrush and aphthous stomatitis will be readily recognized by close inspection. Aphthæ is an ulceration; a yellowish-white, scooped-out ulcer, with rounded edges, on a level, or it may be below the level of the surrounding surface, while thrush is deposited, as it were, on the surface, is elevated, and is white in color. Of course, thrush is found only in young children (three to six months), rarely after that, except secondarily in grave intestinal disturbances.

The treatment of aphthous stomatitis consists in removal of any irritating substance, and the use of an alkaline mouth wash of either borax or bicarbonate of soda. In these cases you will generally find that the intestinal tract is disturbed, and the stools, instead of being bland, are offensive, curdy, and green, in which case give something to dislodge offensive secretions of the intestinal tract, as follows:

R.—Sodii bicarb. gr. j–jj.
Syr. rhei aromat. ʒ ss–j.

If the bowels are loose, continue until the character of the stools is normal. If the bowels are constipated, add simple syrup of rhubarb.—*Hollopeter.*

Salicylate of bismuth represents our antiseptic treatment of intestinal disorders in children. It may be given in doses of gr. viij, with gr. j of sugar of milk after each passage, unless they are very frequent.

—*Hollopeter.*

Eight days are not enough to heal a large wound. The edges may be approximated and appear firmly united, but the least strain is apt to cause the wound to gape again, so beware of removing the stitches too soon.—*Laplace.*

Attending the application of plaster of Paris bandage for fracture there is some danger of swelling of the limb, which being so inclosed, in a hard and unyielding mould, might cause gangrene. In order to avoid this, before applying the plaster of Paris, we first envelop the limb with a covering of common cotton (not absorbent cotton) which, not having had the oil removed from it, retains its elasticity and does not absorb water. Over this is applied a common bandage, and then the plaster of Paris bandages. When these have set, the layer of cotton beneath allows for a certain amount of possible swelling, but is also sufficiently firm to retain the ends of the bone in apposition.—*Laplace.*

Any irritation at the neck of the bladder is felt at the end of the penis, and vice versa, any irritation at the end of the penis affects the neck of the bladder.

—*Laplace.*

The perforating ulcers which start from the skin under the toe, partake of the nature of epitheliomas. When they have lasted for a long time they cannot be cured, but return after removal. If, however, they are treated early and freely removed, they may not return.—*Laplace.*

PHILADELPHIA HOSPITAL.

DR. HIRST brought before the students a baby which he said would die from enterocolitis—one of the most common diseases with which the doctor has to deal. He exhibited it that the peculiar appearance of a child under such conditions might be noted. In commenting, he said that a baby's movements are naturally yellow and soft; but where there is infection of the intestinal tract, the move-

ments become dark green, partly from excess of bile, and partly from the action of the peculiar microbe present in such cases.

Dr. McKelway, in speaking of the symptoms of pregnancy, and of the difficulty sometimes attending the recognition of this condition, mentioned a case, which he himself had seen, of a woman who had a tumor which resembled a fourth month pregnancy. A vaginal examination disclosed the body of an unimpregnated uterus, on one side of which was found a tumor, believed to be an ovarian cyst; on laparotomy, however, an impregnated uterus was found. The uterus was bi-cornual, and the impregnated ovum developing in one of these horns gave the appearance of an ovarian cyst.

I do not think, when a woman denies pregnancy, there is ever an absolutely perfect proof of a pregnant uterus in the first three months.—*McKelway.*

Dr. McKelway quoted Dr. Goodell as follows: "If, after the sixth or eighth week, the cervix of a woman believed to be pregnant is as hard as the end of your nose, she is not likely to be pregnant; if, however, the cervix is as soft as your lips, she is probably pregnant."

Fœtal movements can be excited by many things. They are apt to be noticed early in the morning more than at other times, believed to be because the child is hungry on account of long absence from food, which the mother's and the child's tissues demand. When the child is dying, or is injured, or its vitality impaired by disease of the uterus, or cord, or of the mother, the fœtal movements are more pronounced. They are also excited by the application of cold to the abdomen, which means have been used to elicit this symptom. These movements may be simulated by abdominal contractions.

—*McKelway.*

Dr. Barton presented an old woman, eighty-four years of age, to show a recovery from fracture in the aged. The humerus had been fractured at the junction of the upper and middle thirds. The arm was brought to the side, using the side of the body as one splint, and a shoulder-cap was placed on the outside. At the end of four weeks the bone had united strongly, a surprising result in a woman of her age.

Dr. Barton also presented an old woman, injured eight weeks ago, whose right leg showed marked eversion and shortening. The foot lay on its side, and the toe could not be brought to the median line. Measurement from anterior superior spinous process revealed almost two inches shortening. Dr. Barton thought it intra-capsular fracture, but as the condition was typical also of fracture of the shaft, and of dislocation of the head of the femur on the pubic bone, he proceeded to the diagnosis as follows: Palpation revealed no dislocation, which, if existent, could readily have been felt. In order to diagnose between intra and extra-capsular fracture, the femur was measured. Measurement revealed that the shortening was between the great trochanter and the outer tuberosity of the external condyle, showing that there had been a fracture of the shaft of the bone. Considerable thickening was then found to exist in the shaft of the bone. Furthermore, it was found that the great trochanter lay below a line drawn from the tuberosity of the ischium to the anterior superior spinous process (Nelaton's line). Had the fracture been intra-capsular, the trochanter would have been found above that line.

If we have ice directly in contact with the skin, it may lower the temperature too much, depressing the tissues and depriving them of their vitality. There should be about four layers of toweling between the ice bag and the tissues.—*Barton.*

COOPER HOSPITAL NOTES.

PELVIC PERITONITIS.

IT is difficult to determine when an endosalpingitis complicates an endometritis for the reason that both alike are nearly painless. But when endosalpingitis terminates in pelvic peritonitis, when an inflammation extends from the mucous lining of the tube to the serous surface of the peritoneum, pain becomes the chief symptom.

Direct extension of an inflammation from the fimbriated extremity of the tube to the peritoneum gives rise to a local peritonitis, of which the extremity of the tube is the focus; but should the retained and morbid secretions of an inflamed tube be suddenly discharged into the pelvic cavity, then peritonitis becomes general.

In either event, adhesions of varying extent form that affect the uterus and implicate the cellular tissue surrounding the uterine cervix, and lying between the folds of the broad ligament. As to the uterus; its natural mobility, which is one of its chief characteristics, becomes limited, and the functional activity of its appendages impaired or destroyed. Ovarian adhesions may render ovulation difficult, and the ovum-conducting power of the tube may become impaired by adhesions that destroy its peristaltic action or close its fimbriated extremity. The body of the uterus may become pathologically anteverted by the neck being pulled backward by cicatricial contraction of the utero-sacral ligaments, or, on the contrary, it may be retroverted and finally retroflexed by the superincumbent weight of the intestines and its fundus bound firmly in Douglas' pouch by adhesive bands. Both sterility and dysmenorrhœa may become resultant factors of a pelvic peritonitis and the adherent uterus a source of pain upon any motion that stretches its adhering bands. Pelvic peritonitis rarely exists independently of pelvic cellulitis, on account of their related positions within the pelvis and their vascular and lymphatic supply. It is claimed by some that pelvic cellulitis or parametritis does not exist independently of pelvic peritonitis and disease of the tubes. It is generally admitted, however, that pelvic cellulitis or parametritis results more frequently from laceration of the cervical canal during parturition than from an extension of an inflammation into the pelvic cavity by way of the fallopian tubes.

—*Godfrey.*

GERMAN NOTES.

HERMÁN D. MARCUS, M.D.

THE TREATMENT OF PERITYPHLITIS.—Dr. Vollert reports the following method of Nothnagel (Vienna) in the treatment of perityphlitis:

He uses at first about ten leeches, besides ice-bags, ice compresses, or Leiter's cooling apparatus. If cold applications or ice are not agreeable to the patient, then Priessnitz or hot compresses may be used. Later on painting with iodoform collodium, or tincture of iodine and tincture gallarum (equal parts); rubbing with *sapo viridis* may be tried if the resorption of the exudate is delayed; quite often a mild tonic, such as *tinctura cinchona comp.*, may be given. To alle-

viate marked pains, morphine is recommended. If the inflammatory stage has passed during convalescence, saline cathartics should be used. Massage with *sapo virid.* is recommended to counteract the sensibility to pressure. In old peri- or paratyphlitis, in cases in which permanent non-absorbent exudates exist, Nothnagel recommends poultices, warm salt-water or mud fomentations; also, warm mud or brine baths. Massage is also to be recommended in such cases. Regarding surgical interference, Vollert advises it only if positive evidence of an abscess is present. During the first days it is not wise to operate, as the case may be cured under above treatment. But if it is found that the exudate becomes chronic, if suppurative fever is present, then an operation would be justified. The most favorable cases for operation are such in which circumscribed, encapsulated perityphlitic exudates exist. Still, there are cases on record in which large paratyphlitic abscesses were cured by correct internal medication. If general peritonitis is present, the prognosis becomes bad. Resection of the vermiform appendix is recommended if perforated, providing no adhesions exist between it and the cæcum, the mesentery, or other intestinal loops.

—*Deutsche Med. Wochenschrift.*

THE ACTION OF CHLORALYD, HYOSCIN, AND HYDRATE OF AMYL IN THE TREATMENT OF MENTAL DISEASES.—Chloralyd, in doses of 15 to 45 grains, is an excellent and not dangerous hypnotic in chronic mental disorders, epilepsy, and sleeplessness due to nervousness. In some cases it acts as a sedative in 15 to 30 grain doses. Sleeplessness due to pain is less benefited by the use of this drug. It is well to change the hypnotic, as the patient becomes easily accustomed to the drug. It acts slower, is just as reliable, less dangerous, and produces an easier and more refreshing sleep than chloral. Hyoscin is not very well spoken of, and of no account. Hydrate of amyl reduces, in epilepsy, the number of attacks. The dose is two to three tablespoonfuls of a 10 per cent. aqueous solution. Still, bad results have been observed. In thirty-five patients who took bromide of potassium, a course of several weeks with hydrate of amyl augmented the convulsions and stupor.

—Dr. P. Naecke, in *Deutsche Med. Ztg.*

SOME NEW DRUGS IN THE CHILDRENS' CLINIC.—

Iodol: E. Kraus used iodol powder for dusting, or 5 per cent. salve. The drug was found to be of special benefit in skin diseases of children with strumous diathesis; less good in its action it proved to be in diseases of the mucous membrane.

Tinctura Cascara Sagrada: As a positive and mild laxative for children this drug is recommended, in one-half to one teaspoonful, according to age.

Ext. Fluid Rhus Aromatica: In enuresis of children, 5 to 10 drops in milk, two or three times daily, it is an excellent remedy, but will only act as long as it is needed; afterward it becomes useless.

Pelletierinum Tannicum: This is an alkaloid prepared from the cortex radices granati (bark of pomegranate root). French authors recommend it as a tæniacuge. The dose is from 7 to 22 grains, according to the age of the child. Kraus considers it unreliable.

Aristol: This drug is recommended in rhinitis of strumous children; also, in chronic eczema. It is of no use in pharyngitis, stomatitis, and other diseases of the mucous membrane. It is used as a powder, but the parts should be previously anointed.

—E. Kraus, in *Arch. f. Kinderheilkunde.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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SOME HOSPITAL CONSIDERATIONS.

THE *Medical Standard* has little use for trained nurses; claiming that their officiousness exceeds their usefulness, and that they incline to the "rule or ruin" policy. "No man or measure is wholly wrong or wholly right" says our favorite philosopher, Herbert Spencer, and if we can only bring ourselves to put up with the defects of a system when the benefits are largely in the ascendant, by remembering that it is puerile to expect perfection, we will be neither optimists nor pessimists, and will reserve our grunts for things that are wholly rotten, such as political insane asylums. We believe in the trained nurse, and think she is a great improvement on the sloppy, snuffy, unreliable Sairey Gamps and Betsy Prigs. There are some things in the environment of the trained nurse, however, that lessen her efficiency and bring her into undeserved disrepute among some of those who think superficially, and who happen to have run up against these imperfections.

The only efficient method of hospital management is through a medical superintendent controlling, and being held responsible for, everything; when it becomes at once possible to suppress injurious influences, and to develop the training school to its highest usefulness.

Where there is a divided responsibility between a lay warden at the head, a couple of internes, who are graciously permitted to make suggestions to him, and a superintendent of trained nurses who may be subservient to warden and medical staff, yield allegiance to one or both, or occasionally conclude to do neither, but to run her own department in defiance of every one; discipline is impossible, while discontent and intrigue are sure to occur.

Even when all these individuals are above reproach individually, the system being faulty, a moral drop in the hospital tone is inevitable. Bad things are fostered by a bad system which a better one prevents.

The stock in trade accusation is made that the medical man is a poor business man and so should not be the head of a hospital, as though "business" were the only consideration, and as though the patients' interests could not be best conserved by a physician, who alone can understand their needs. The necessity of every petty expenditure being explained by the doctors to an ignorant person is degrading, and it is false that a physician need be a bad business man.

Undoubtedly deep professional interests do tend to make carelessness of even personal interests, and the dead beat rabble too often realize this and take advantage of it, unloading their, often vile, griefs upon the poor doctor without recompense; but the same ability that causes this self-abnegation, the professional unselfishness, is the very one that would make the doctor the very best head of a hospital.

As such he must forfeit development in a probably coveted direction and yield details to subordinates. Special ability is merely general ability, and when the medical superintendent finds that he cannot in justice to his duty spend all his time in the laboratory, clinics, operating room or library, he will find his recreation there while devoting himself to the general oversight of affairs.

A steward under him can save unnecessary mercantile and mechanical labor. All the departments: nursing, feeding, treatment, are thus under intelligent supervision and good results are surest (other things being equal). Under other systems a foothold is given to dissension, thus:

A female club (too often hysterically and ignorantly philanthropic) patronizes and interferes with the training school pupils, in some cases trying to missionary Christian science, faith cure or some such fol-de-rol into hospitals by proselyting the nurses. This club, or sometimes the superintendents of the school whence the originators of the hospital-school came, may and often do set themselves up as arbitrators and dictators in all matters of difference between their protégés and the hospital staff. Lying, trickery, slander, and neglect of duty is the outcome invariably, as necessarily as when Jones looks after your cook, Brown bosses your chambermaid, and the Rev. Robinson advises your wife in both spiritual and temporal matters.

A few illustrations are worth recording: One of the gentlest, most refined, ladies I ever knew was the wife of an assistant physician in an insane asylum. She had a peculiarly good influence over some of the female patients and was encouraged to exert it by her husband. She was the hearty co-operator of the lady physician of the place, a noble character, skilled, and untiringly unselfish. The good done by these two became too glaringly manifest, and the warden and politician who occupied the alleged medical superintendency grew alarmed, as demagogues will when credit is being given in other than their direction, and prompt measures were adopted to suppress this good work.

Had there been the control of a single medical superintendent worthy of the name, he would have been proud of his subordinates' work, but as the

real management was through burglars, pimps, and saloon-keepers, it would be fatal to his interests to have his subordinates attracting reputable attention, as the robberies, wretched food and medicine, and boodles generally must necessarily be brought to light through too much sincerity on the part of underlings.

Lay thieving supervision here was a bar to even ordinary decency on the part of the well disposed. The bad system brought in bad men and negated the endeavors of the good. By an accident this same asylum fell under the control of a high-minded medical superintendent, one who understood his patients' needs and was a good alienist, but the warden (who finally went to State's prison for theft) handicapped him in every way possible, because he would not be a party to robbery of the insane. This warden found that the superintendent of the training school was personally hostile to the medical superintendent, and forthwith intrigued successfully through the trained nurses to convert the asylum into a pandemonium. Thus the very purlieus were enabled to use an otherwise excellent institution to the detriment of everything reputable.

Again, a neophyte entered a hospital training school, and, though far from being angelic, won the admiration of the patients and the warden's assistants, in addition to receiving full appreciation from the medical staff. A few of the nurses became jealous, as narrow minded people will, and "put up a job" on the "daisy," which resulted in her dismissal. The doctors had no right to interfere, the superintendent of nurses, a most excellent woman, disdained to regard their opinion, the warden could not interfere except by employing the girl as a clerk, when she lost her nurse's place. Now this is a delightful state of affairs. The patients grumbling for the return of their pet, the doctors mildly pleading and being rewarded by snubs, and then another department defiantly coming off victorious and vindicating the dismissed one by enabling her to prove efficiency in another quarter.

It so happens that every one of the parties, except the two or three intriguing nurses, are very honest, well-meaning people. Of course under malevolent department heads worse things than this would occur. Undivided medical responsibility and supervision would investigate and suppress conspiracies of this kind even though the tendency to them were greater than in this instance. Divided authority opens the door to trickery, pretext finding, dishonesty, immorality of other and various kinds, and is otherwise prejudicial to discipline.

Things evolve, however, and the Simon pure trained nurse will exuviate these possibilities and bless the sick-room with her bright face, kindly presence and skilled watchfulness, and the white mull caps and striped gingham will uniform the noblest sisterhood of the world.

S. V. CLEVENGER.

It is said that an ancient denizen of the malarial belt, happening to be in San Francisco at the time of the earthquake, immediately rushed into a drug store and yelled for quinine.

Society Notes.

AMERICAN ORTHOPEDIC ASSOCIATION.

FIFTH ANNUAL SESSION.

Held at Washington, D. C., September 22, 23, 24, and 25, 1891.

ORTHOPEDIC SURGERY AS A SPECIALTY.

DR. A. B. JUDSON, of New York, in the President's address, said that orthopedic surgery is specially the domain of physical demonstration, where subjective symptoms give place to objective signs; where treatment is chiefly mechanical, and where results are recorded in degrees of a circle, and fractions of an inch. It exists and thrives as a specialty, because the general practitioner concurs with the public in committing patients who, from the nature of the case, generally recover with some deformity and disability, to the care of experts.

DR. N. M. SHAFFER, of New York, defined orthopedic surgery as that department of surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities, for the proper treatment of which special forms of apparatus or special mechanical dressings are necessary.

DR. V. P. GIBNEY, of New York, proposed a definition as follows: That department of general surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities.

ORTHOPEDIC NOSOLOGY.

DR. W. R. TOWNSEND, of New York, advised the construction of a uniform nomenclature for orthopedic affections, to facilitate the taking of histories, and to increase the value of reported cases. A committee was appointed for this purpose.

THE LATE MR. THOMAS.

DR. A. J. STEELE, of St. Louis, paid a friendly tribute to the late Mr. Thomas, of Liverpool, a corresponding member of the association, whose methods have been so widely discussed, and whose influence is felt in many branches of orthopedic practice.

CRURAL ASYMMETRY AND LATERAL CURVATURE.

DR. H. L. TAYLOR, of New York, described two instances in which the leg was two inches and one and one-eighth inches short, respectively. Both cases were in young women. The short limb was larger and stronger; the shortening was chiefly below the knee, and there was no lateral curvature.

DR. A. HOFFA, of Wurzburg, Germany, described a specimen which proved that in one instance the shortness was due to union of the neck and shaft of the femur at an acute instead of an oblique angle.

DR. F. BEELY, of Berlin, illustrated with specimens of lateral curvature, and ingenious models, the changes which occur in the bodies of the vertebræ preceding rotation, explaining how the paraspinous sulcus is shallow and broad on the concave, and deep and narrow on the convex sides, a condition which is reversed in the lumbar region by the absence of ribs.

SPINA BIFIDA AND CLUB-FOOT.

DR. H. A. WILSON, of Philadelphia, related the case of a child of four years. The ordinary methods of reducing the deformity of the feet excited suppura-

tion, which resisted treatment for six months, as long as the patient remained under observation. There were sensory paralysis and deficient circulation in the lower extremities. The same intolerance of surgical treatment thwarted all attempts to treat the spinal tumor.

DR. L. A. WEIGEL, of Rochester, had had similar trouble with a similar case, but found that when the child was older it was possible to treat the deformity of the feet with success.

DR. A. E. HOADLEY, of Chicago, related a case of spina bifida, in which good results had followed an operation in which he did not attempt to repair the vertebral deficiency, but had simply turned up large flaps and united them by silk sutures.

DR. T. M. L. CHRYSTIE, of New York, reported a case of congenital equino-varus, with absence of great toe and contiguous bones of the instep. Mechanical treatment speedily reduced the deformity, with a gain of symmetrical gait.

DR. W. E. WIRT, of Cleveland, related an interesting and unusual case of club-hand and club-foot, with other congenital malformations.

DR. HOFFA said it was evident that all cases of club-foot do not have the same causation. The cases reported were due to some fault in the earliest stages of development.

SPASTIC PARALYSIS AND SPINA BIFIDA.

DR. W. N. BULLARD, of Boston, reported a successful operation by Dr. C. L. Scudder, of Boston, for the relief of spastic paraplegia in a child with spina bifida. He thought the paraplegia was not due directly to the spina bifida, but to the accompanying hydrocephalus. He advocated electrical treatment and faradization, rather than galvanism.

DR. WEIGEL reported a case in which division of all shortened tissues and the use of a brace had secured a favorable result.

DEFORMITY AFTER KNEE-JOINT EXCISION.

DR. J. C. SCHAPPS, of Brooklyn, said that after excision the two united epiphyses make a mass of soft bone, in each end of which is inserted a long lever. With this leverage it is possible to restore and maintain a straight limb by simple mechanical treatment.

DR. A. M. PHELPS, of New York, thought that recurrence of deformity can be prevented by liberal resection of the hamstrings.

DR. HOFFA said that relapse often occurs from incomplete removal of diseased tissue, and that when excision is done in early life, and all disease removed, marked shortening will not occur.

DR. BEELY said that flexion could be prevented by over-correction, but at the risk of further over-correction as the result of locomotion. Apparatus designed to prevent recurrence of deformity should relieve the limb from the weight of the body.

DR. TAYLOR objected to free division of the hamstrings, as these muscles are useful in balancing the pelvis on the femur, even after motion at the knee is abolished.

DR. J. D. GRIFFITH, of Kansas City, had prevented flexion by removing all the disease, and without dividing the hamstrings.

DR. SCHAPPS said that in many patients under ten years excision was to be preferred to mechanical treatment.

KNEE TROUBLES IN LOCOMOTION.

DR. SHAFFER related a number of cases in which an elongated patellar ligament had caused pain and difficulty in locomotion.

DR. A. M. VANCE, of Louisville, thought that the ligament might become shorter if not constantly stretched by use. Rest was indicated.

DR. GIBNEY cited a case in which rest for one-and-a-half years had not caused shortening.

DR. SHAFFER said his patients had been benefited by giving lateral support, thus converting the joint into a true hinge.

ATROPHY IN JOINT DISEASE.

DR. E. G. BRACKETT, of Boston, argued that atrophy is due to disease, and not entirely to reflex irritation.

DR. A. G. COOK, of Hartford, said that atrophy of the foot, often very marked, can be only the atrophy of disease.

DR. J. K. YOUNG, of Philadelphia, believed that the atrophy in question is the result of reflex interference with nutrition. In hip disease it appears first in the thigh muscles, especially the adductors.

ATROPHIC ELONGATION.

DR. ROSWELL PARK, of Buffalo, described the atrophic elongation conspicuous in the lower extremity. As the result of disuse from disease, with avoidance of pressure on the bone ends, the bone lengthens more rapidly than its fellow. This is illustrated in growing children with disease of the tibia or femur, and is noticeable in some cases of hip disease.

TREATMENT OF HIP DISEASE.

DR. PHELPS said that traction and fixation should be enforced to prevent destruction by intra-articular pressure. Ankylosis is the result, not of fixation, but of disease. The patient should be put to bed from three weeks to four months, and should then wear the lateral traction fixation splint, which was exhibited. Children under three years are placed in the plaster of Paris portable bed, which was also shown.

DR. WIRT exhibited a new device for traction, in which the force of the lever is changed in rectilinear instead of circular motion, without key, screw-driver, wrench, buckle, or strap.

DR. R. H. SAYRE, of New York, said the invention gave accurate and easy adjustment in the direction of traction; but in the direction of relaxation the control was defective.

DR. A. J. GILLETTE, of St. Paul, was satisfied with the results obtained by the use of Thomas' splint.

DR. VANCE said he practised fixation at the hip; but believed much depended on the surroundings of the patient.

DR. SHAFFER believed the best results can be obtained by the use of the long Taylor traction splint. He thought results should not be reported till six years had passed, as relapses were not uncommon.

DR. RIDLON, of New York, said a splint should secure immobilization by antero-posterior leverage, as in Thomas' splint, by an action identical with that of the Taylor spinal brace.

DR. STEELE approved of the combination of the English method of rest with the American plan of traction.

DR. TAYLOR practised rest in bed with traction in the acute stage, to be followed by a splint which allows locomotion.

DR. SAYRE thought but few cases required lateral traction. When the inflammation had ceased, he applied passive motion. If the pain and tenderness following last more than twenty-four hours, the passive motion had not been rightly used.

DR. E. M. MOORE, of Rochester, believed that a joint only *moderately* inflamed demands motion. He employed traction with a certain amount of motion.

CONGENITAL DISLOCATION OF THE HIP.

DR. PHELPS exhibited apparatus for the treatment of this affection, and described his method and its results.

DR. E. H. BRADFORD, of Boston, had modified the apparatus in previous use by adding an appliance with which the patient is allowed to walk about. The joint is thus protected, as in convalescence from hip disease. Those appliances he had made of aluminum, for the sake of lightness.

DR. C. C. FOSTER, of Cambridge, said the best recorded result had been obtained by Dr. Buckminster Brown, whose patient was treated by mechanical means in bed.

DR. A. HOFFA had operated by deepening the acetabulum, which is practicable from the thickness of the pelvis at this point. At first, he sewed a periosteal flap over the trochanter; but this is unnecessary. Two months ago he examined his first case, two years after the operation, and found a movable joint, freedom from the characteristic gait, and absence of lordosis.

MR. HOWARD MARSH, of London, divided these cases into, (1) those in which the bone slips about on the wall of the pelvis, and (2) those in which it is fixed. The majority belong to the second class, and in these operation is useless; but is more properly applicable to these cases of the first class in which the head is high up and movable. The anterior position is the most favorable, because lordosis, which depends on the backward displacement of the head of the femur, is absent.

DR. RIDLON said that, as subjects for treatment, anterior dislocations are more hopeless than posterior ones.

DR. DE F. WILLARD, of Philadelphia, said treatment should be by forcible attempts at reduction, to excite inflammation, followed by traction and systematic exercise.

MALIGNANT DISEASE AND POTT'S DISEASE.

DR. JUDSON reported three cases in which Pott's disease and malignant disease of the vertebræ had been confounded by himself and other observers. In one, the diagnosis was made ante-mortem. The patients were four-and-a-half, thirty-five, and forty-two years, respectively. The chief diagnostic points are:

1. Deformity present in Pott's disease; absent in malignant disease.
2. Local disability.
3. Local pain; both absent in Pott's, and present in malignant disease.

DR. WILLARD had seen two cases in which his diagnosis was confirmed post-mortem.

DR. GIBNEY reported a case, in a man of forty years, in which he and others had been baffled in diagnosis. There was sarcoma of the fifth and sixth cervical vertebræ.

MR. MARSH related the case of a child which was extremely difficult to diagnosticate, and which proved to be malignant in character.

SYPHILITIC POTT'S DISEASE.

DR. RIDLON said that in this form the onset is more rapid, the pain and disability greater, the kyphosis sharper in outline, and abscesses often appear before deformity. If recognized lesions of hereditary

or tertiary taint are present, treatment should be by large doses of mercury and iodide of potassium.

DR. B. LEE, of Philadelphia, referred to cases of this origin which had come under his observation.

POTT'S DISEASE IN THE OLD.

MR. MARSH had observed instances of suppurative tuberculosis in the metacarpus, tarsus, testis, cervical glands, knee and hip in eight patients between sixty-three and seventy-three years. But senile tuberculosis of the spine is most rare. He had seen two cases. The patients were sixty-four and sixty-five years, respectively. The College of Surgeons, of London, possessed an osseous specimen of the action of senile tuberculosis of the upper cervical vertebræ. In his "Studies of Old Case Books," Sir James Pagot had recorded a case of Pott's disease in a gentleman of fifty-five, attended with angular curvature.

DR. SAYRE recalled the case of a patient, aged fifty-five years, who recovered from Pott's disease with paraplegia and abscesses.

POTT'S DISEASE AND PREGNANCY.

DR. T. H. MYERS, of New York, had collected twenty-five cases of labor in fifteen patients recovered from Pott's disease. In no instance did caries recur. But of seven cases in which the disease developed during pregnancy, three died, and three were left paraplegic. Normal parturition often follows in cases of deformed pelves whose measurement would indicate that it was impossible. These patients should be examined by the obstetrician early in gestation.

DR. TAYLOR knew of many cured patients whose marriage had been followed by the birth of healthy children.

DR. G. W. RYAN, of Cincinnati, thought it was a question of allowing the tuberculous to marry. He knows of married women, deformed by Pott's disease, who had borne and raised healthy children.

DR. STEELE said one of his patients recovered from Pott's disease had borne six healthy children.

DR. LEE said that one of his patients, with a large lumbar kyphosis, had borne twelve children, who, with the mother, are all in good health. He thought Pott's disease, even in the lumbar region, rarely produced narrowing of the pelvis.

DR. VANCE had seen a number of cases in which this deformity had not made labor of more than average difficulty.

PARAPLEGIA IN POTT'S DISEASE.

DR. BRACKETT said that relief from paraplegia may be confidently expected from continuous extension and fixation, even in cases of eighteen months' standing. This should be continued for some time after recovery.

DR. YOUNG reported two cases of complete recovery, in which there had been absence of sensation, a feature always of grave import.

DR. SHAFFER referred to a case in which the autopsy showed that a portion of the eighth dorsal vertebra had nearly cut through the cord, leaving but a slender thread.

DR. HOFFA said that in these cases, the spine should be put absolutely at rest. He had collected thirteen operations within the vertebral canal. Two died at once, two recovered, and would perhaps have done so any way. In the others, there were immediate good results; but relapses soon occurred. The operation has no great future before it, and should be limited to those cases in which the processes alone are affected.

DR. S. KETCH, of New York, had now under treatment a patient who had been paraplegic for five years; but he still maintained a hope of effecting a recovery.

DR. HOFFA suggested that an abscess may be exerting pressure on the cord.

MR. MARSH said paralysis rarely depends on the pressure of an abscess; but:

1. On softening of the cord.
2. Pressure of a displaced sequestrum.
3. Most common, on pressure from exudation.

He would only operate after thorough trial of rest.

DR. WILLARD said we could not absolutely diagnose the cause. When there are extensive inflammatory deposits about the arches, laminectomy may relieve the posterior pressure and allow expansion of the cord.

DR. LEE said that in all cases of this form of paraplegia, suspension would materially hasten recovery.

ABSCESSSES IN POTT'S DISEASE.

DR. TOWNSEND thought that, as a rule, these abscesses should not be opened. In some cases aspiration should be done, and in others the cavity should be opened and drained to prevent sepsis and danger to life. His views were based on the history of 380 patients, 75 of whom had abscesses.

DR. YOUNG suggested the division of lumbar abscesses into external and internal, according to their relation to the psoas fascia.

DR. VANCE advocated aspiration, repeated as often as fluid is detected. In this way he cures three out of five cases. The depot is thus kept small, and the extent of subsequent operations, if necessary, is limited.

MR. MARSH had rarely obtained a good result by the use of the aspirator.

DR. RYAN said he had found aspiration to be a poor dependence. When interference becomes necessary, he believed incision to be the most conservative and effective procedure.

MR. MARSH said that, in his observation, it is best to open freely, evacuate thoroughly, and then apply pressure to assist in closing the cavity.

DR. B. E. HADRA, of Galveston, said that on general surgical principles, such abscesses should be evacuated.

DR. WILLARD would let dormant and caseating foci alone, liquefying collections he would aspirate and inject with iodoform emulsion, and if true pus were present, he would incise, wash out with sublimate solution, and avoid undue manipulation, which might cause fissures, which would let the tuberculous poison into the system. He would then suture the incision, and inject iodoform and boiled olive-oil.

DR. BRADFORD said that, while he did not think the danger from opening large abscesses was so great as had been thought by some, he was aware that absorption of such abscesses is not at all uncommon.

DR. J. E. MOORE, of Minneapolis, said the evacuation of a spinal abscess is a matter of great surgical responsibility, as it is an aseptic cavity, difficult to protect from infection after operation.

DR. HOFFA would open only those abscesses which cause severe pain, or are likely to give rise to septicaemia.

DR. LEE would never open an abscess of this kind unless compelled to by the conditions mentioned by the last speaker.

DR. KETCH said there was danger that in our anxiety to treat a secondary feature we neglect the disease itself.

DR. SHAFFER would not say that incision was never advisable, but generally it is wrong to open one of these abscesses. A very large abscess cannot be washed out, and its disappearance may be confidently expected, especially if efficient mechanical treatment is practicable.

DR. MYERS said that it was proven:

1. That it is impossible to completely remove bacilli from the abscess cavity.
2. That bacilli-infected wounds at times heal primarily.

Infection is more imminent after incision, because the wound lays open channels of absorption.

WIRING THE VERTEBRAL PROCESSES.

DR. HADRA suggested that the spinous processes at the seat of the disease be exposed, and then firmly wired together to secure rest and prevent deformity. The operation, as he had performed it for fracture of the cervical spine, was extremely simple and effective.

DR. SAYER thought the wires would not bear enough force to remove the weight from the vertebral bodies, and that outside protection would be necessary to prevent lateral and rotatory disturbance.

DR. JUDSON thought it was a question whether wiring was applicable through the long periods in which consolidation is delayed. Intolerance of the skin always prevents such pressure as we would like to make on the kyphos. The method proposed circumvents this difficulty.

DR. R. WHITMAN, of New York, said that due consideration should be given to the difference in development between the growing and adult spine.

DR. KETCH did not see how the proposed operation could take the place of apparatus.

DR. MOORE said it was a most simple and harmless procedure, and, notwithstanding the theoretical objections, he would accept the first favorable occasion to try it.

PROGNOSIS AND TREATMENT OF POTT'S DISEASE.

DR. KETCH had learned, from seventy-five cured cases, that in length of treatment and degree of deformity, the upper region of the spine is most favorable, and the middle least of all; that paraplegia more frequently accompanies disease in the upper than in the lower regions, and that cases of traumatic origin recover sooner than those of tubercular origin. Sudden deaths sometimes occur in cervical caries from interference with respiration.

DR. B. BARTOW, of Buffalo, said that the earliest important sign in the dorsal and lumbar regions is lateral curvature, dependent on nervous tenderness. Apparatus should be constructed to oppose the rotation accompanying the lateral curvature, as well as the antero-posterior deformity. He used the plaster of Paris jacket applied to effect the above objects.

DR. FOSTER said that extension in bed is the best method in the acute stage. Extension should be made by light weights, the cords leading over the head and foot of the bed and attached to waist-belts, chest-belts, and head-straps.

DR. WEIGEL reported a case of cervical Pott's disease, with abscess and paraplegia, successfully treated by extension in bed.

DR. RIDLON had kept patients in bed from three to four years, and had never seen a case which was not benefited generally and locally.

DR. RYAN said recumbency was the ideal treatment, but it is in many cases impracticable. He had found split plaster jackets efficient after the acute stage.

DR. LEE said that many years ago, when the plan had fallen into entire disuse, he was the first to adopt suspension from the practice of Dr. J. K. Mitchell. The apparatus was Le Vacher's head support and jury-mast, attached to a chair or go-cart, or to a door-way swing.

DR. SAYRE said that in the cervical and upper dorsal region, a metal posterior splint supported on the pelvis should be used with a jury-mast; and in the lower dorsal and lumbar regions, a plaster of Paris jacket with a jury-mast. Recumbency should be practised in the acute stage; children should be placed in the wire cuirass.

DR. KETCH had been disappointed with the plaster of Paris and jury-mast in the cervical and upper dorsal region. He commended the Taylor apparatus and chin-piece. In the lumbar region almost any supporting apparatus will secure a good result.

DR. TAYLOR said that the antero-posterior lever secures rest and protection, and combats deformity. Old and neglected cases are especially amenable to treatment, just as ankylosis is later and rarer than is generally supposed. Abscesses and paraplegia do not forbid a favorable prognosis.

DR. BRADFORD said that the plaster of Paris jacket was the readiest method, but had its disadvantages; that a steel brace gave better support, but demanded more skill and care, and that recumbency was the surest way to prevent deformity; but, as a rule, was impracticable for the long periods covered by the disease.

TYPHOID SPINE.

DR. GIBNEY reported an additional case of typhoid spine, in a man of forty five years, in which, different from the cases previously reported, there was marked deformity in the cervical region, dating back to typhoid fever at the age of twenty-two. Two years of pain and disability had immediately succeeded the typhoid attack. Usually, the symptoms had not appeared till one or two months after the fever.

DR. HADRA recalled an epidemic of typhoid with so much tenderness on pressure of the vertebrae that the affection was at first thought to be meningitis.

RHEUMATIC SPONDYLITIS.

DR. RYAN said that this rare affection should not be confounded with rheumatoid arthritis of the spine. It is usually accompanied by rheumatic manifestations elsewhere. In the early stage the symptoms resemble those of tubercular spondylitis. Later, the deformity is not angular, but resembles that of senile kyphosis. Treatment should be directed to the relief of pain by support, cautery, and medication. In the chronic form, when pain has lessened, mobility should be encouraged by passive motion.

DR. HOADLEY deplored the confusion which is found in the nomenclature of these conditions which produce such a variety of results. He thought both rheumatism and osteo-arthritis were microbic diseases.

If ligamentous structures interfere with motion, passive motion was proper.

DR. LEE was reminded of a case which was at first thought to be spinal myalgia, but which proved to be gouty disease of the cartilages, an infrequent affection. Apparatus afforded relief, but, of course, not a cure.

DR. RYAN said that gouty spondylitis is generally attended by manifestations in other parts of the body. He had failed to state that his patient had limited respiratory movements.

DR. VANCE related a case in which there was, in addition to the spinal affection, complete immobiliza-

tion of the thorax with chiefly diaphragmatic respiration.

DR. BARTOW had seen a case in which relief was afforded by the spinal jacket.

DR. GILLETTE reported a case which, at the first glance, resembled the deformity of Pott's disease, but which proved to be rachitic in its etiology. Improvement followed a few days after suspension was begun.

TORTICOLLIS.

DR. WHITMAN inferred, from the study of 264 cases, that torticollis was more frequent in females than in males, and that the two sides of the neck were equally liable. Acquired torticollis, being often the result of suppurating cervical glands, should be treated at first by mechanical support, to secure rest and prevent deformity. Later, division of contracted parts, with careful after-treatment, should be practised.

DR. HOFFA said that cases of foetal origin have immediately after birth an atrophy of the face and head.

DR. WHITMAN thought that the asymmetry of the face and head was a late feature of torticollis due to muscular action on the growing bones.

SACRO-ILIAC DISEASE.

DR. LEE said the sequence of events is as follows:

1. Injury of the synchondrosis.
2. Subacute inflammation.
3. Irritation of the nerves of the joint, transmitted to the nearest plexus.
4. Resulting pain in the sciatic. The sciatica should be considered the result, not the cause, of all the trouble.

In nine cases out of ten, neuralgia is the effect and not the cause of any trouble. As stooping in sacro-iliac disease is injurious, he had devised a handy instrument with which the patient can pick up an object from the floor while remaining erect.

ELECTION OF OFFICERS.

DR. BENJAMIN LEE, of Philadelphia, was elected President, and DR. JOHN RIDLON, of New York, Secretary, for the ensuing year.

Annotations.

DR. FRANK W. REILLY has been appointed Secretary of the Illinois State Board of Health, to succeed Dr. Rauch. Dr. Reilly has had some experience in the work, and has been for four years the managing editor of the *Chicago Daily News*. It is not likely that the good work inaugurated by Dr. Rauch will in any way suffer in the hands of his successor.

THE increase of typhoid fever in Chicago is beginning to attract attention. The cause is said to be the low water in Lake Michigan, and the exceeding foulness of the river. Efforts have been made to divert the current of the river from the lake, and pumps erected to convey the water off into an affluent of the Mississippi system; but the plant is deficient. When the water-way to Lockport has been completed, some relief is expected. Meanwhile, Chicago must move in the matter if she expects to avoid the unenviable notoriety that Philadelphia obtained from her Centennial typhoid epidemic.

SO very rare it is for the religious newspaper to say a word against quackery, that we must find space for this little cutting from the *N. Y. Christian Advocate*; all the more as the writer touches firm ground in his argument, on which science and religion can stand together. In whatever way the reformation of the drunkard has been effected, we have infinitely greater confidence in its permanence if, with a realizing sense of human frailty, he kneels down and humbly asks his God's help in his efforts to do right henceforward:

"Dr. Keeley and his advocates ostentatiously parade the statement that "will-power" and "conversion" do not, except in rare cases, effect cures. This is a gross misrepresentation, whoever makes it. We have given several hours to recalling the number of persons whom we have known in a life of continued intercourse with all classes in many cities and towns, calling up the history of our fellow-students in fifteen years of school and college life, whom we have known to reform from supposed incorrigible drunkenness without the help of this system, and could make and authenticate a list of above seven hundred. There are living, to our knowledge, in this country, thirty-five ministers of the gospel, of different denominations, some occupying high rank in this city, who were drunkards, and some of them of a very low type. One, our neighbor, long a hopeless drunkard, reformed, attained a great practice as a lawyer, had a honored career in the Senate, and died a sober man. We have known men to become insane through drunkenness, to be incarcerated in an asylum, and there form the resolution, and to go forth to fight their appetites, and win victory without the help of any drug, hypodermic injection, or magic of any sort."

APROSEXIA AND HEADACHE IN SCHOOL CHILDREN.

GUYE (*Practitioner*) proposes the word *aprosexia* to designate the inability to fix the attention on any more or less abstract subject. We are glad a scientific name has been found for this state of mind, and that the term has such a truly scientific and unintelligible aspect; one calculated to discourage the angry parent who feels tempted to box the ears of the child whose attention is with difficulty fixed on some abstract subject. How much suffering would have been avoided had this term been in vogue when we were struggling with our "Effectual Calling."

Dr. Guye says that with the impairment of the attention goes feebleness of memory and a tendency to headache. Sometimes sight and hearing are also affected.

In one case he found that a child, about seven years old, had enlarged tonsils, mouth breathing, and a stupid face. In a year's schooling he had only learned three letters of the alphabet. The tonsils were removed, and the nasal stenosis treated. In a few weeks the child had learned his alphabet, and has since kept up with his classmates.

In a second case, a girl fifteen years old complained of almost daily headache. She had great difficulty in keeping up at school; the lessons learned in the evening were forgotten by morning. She had been a mouth-breather from infancy. Part of one tonsil was removed, and the nasal stenosis treated. A week later she astonished her doctor by her bright looks; the headache was gone, the lessons were easily learned, and all signs of deficient intelligence disappeared.

The conclusions follow:

1. No child should enter school without a medical certificate of its fitness for mental training.
2. Medical school inspectors should be provided; and among other duties, they should be required to inspect the upper air passages.
3. Teachers should advise the inspectors of all backward children and mouth-breathers.
4. If there are no medical inspectors, the teachers should be notified of the meaning of mouth breathing, and taught to look for it in backward children.

Letters to the Editor.

A PROLONGED FAST.

DR. WARSHAVSKY (*Vratch.* N. 19, 1891) tells us a most interesting case of a lady thirty-five years old, who had made up her mind, in consequence of extreme poverty, to starve herself to death. For this purpose she found refuge in the garret of an uninhabited house at a distance from town. The garret had broken windows, admitting of free access to winds and frost. In the first days of her fasting she was still able to get up to pass urine; but afterwards she lost the strength to do this, and could not leave her seat. The janitor of that house accidentally entered it; and hearing feeble human cries and sighs in the garret, he immediately notified the local authorities of the fact, and the sufferer was removed to the hospital.

The patient was in full consciousness; but the pulse in the radial artery could not be appreciated; the heart sounds were scarcely to be heard; the body extremely emaciated, covered with and eaten up by insects; the skin had assumed a yellow earth-like tint; the cardiac region and the whole upper part of the abdomen extremely tender. According to the patient's statements she had not taken food for twenty-six days; neither did she have a drop of water; her bowels had not been opened in this time.

In the hospital she was given to drink a little port wine and milk. Epigastric pain, which caused her to sigh, disappeared after a spoonful of castor oil. Then the patient began to improve gradually; but the radial pulse could not be felt as yet. During the first two weeks of her hospital life she suffered from a slight diarrhoea and oedema of the legs. Little by little, however, all the pathological symptoms disappeared, and the patient finally completely recovered.

S. SEILIKOVITCH.

338 SPRUCE STREET, PHILADELPHIA.

DOSIMETRY IN THE JUGULATION OF ACUTE BOWEL AFFECTIONS.

THE power of dosimetry, so-called, or positive medication in the jugulation of acute affections, is strikingly illustrated in a case at hand.

Was called hurriedly, on Saturday A.M., September 26, to see a little boy, three years of age. Found the little chap in a high fever, vomiting every few moments large quantities of frothy water, almost clear; nervous as a hawk, and ugly as sin. What little of his tongue I could see between yells was fairly clean. I had my usual arsenal of granules along, and gave him aconitine $\frac{1}{16}$, 10 in 30 teaspoonfuls of cold sweetened water, and added $\frac{1}{2}$ dr. of aromatic spirits of ammonia, with directions to give a teaspoonful of the mixture every half hour.

This was done quite faithfully, and on my visit at 8 P.M. I found the little fellow asleep and sweating well, with temperature about the same. As there is

scarlet fever in that locality I thought at first that this was possibly the trouble, but careful examination gave no confirmatory symptoms. So I left him for the night, continuing the aconitine, and adding one granule ($\frac{1}{8}$ gr.) of sulpho-carbolate of zinc to each dose, with directions to give it at least every hour during the night. This was done, and at my visit the next morning—twenty-four hours from the first one—I found temperature normal, and the nurse reported three or four green stools during the night, and said, in reply to my query, "Yes, doctor, they smelled just awful." So I continued the granules of zinc, and added one of copper arseniate. The breath at this time smelled as badly as anything need to to "turn a dog's stomach." I ordered a hot tub bath and a change of clothing, and gave the medicine every half hour during the day while awake. This evening I find the pulse and temperature still normal; stools much better color; odor nearly gone; tongue and breath natural; or, in other words, recovery complete. I now continue the last prescription, with the addition of a trifle of arseniate of strychnine, and shall see the case once or twice more to keep things straight, and that is all; and another victory over disease is gained quickly, safely, and pleasantly with these "arms of precision," the alkaloidal granule.

W. C. ABBOTT, M.D.

EAVENSWOOD, CHICAGO, ILL.

The Medical Digest.

FOR DELIRIUM TREMENS.—

R.—Paraldehyde gr. v.
 Bromide of ammonium..... gr. x.
 Hydrate of chloral..... gr. x.
 Tinct. hyoscyamus..... gtt. x.
 M.—S. Take at one dose.

In the *St. Louis Clinique*, Fyke speaks of the treatment of incipient tuberculosis. He advises the use of the "four chloride" solution, as admirably adapted to all wasting and anemic conditions:

R.—Hydrargyri bichloridi..... gr. j.
 Liq. arsenici chloridi..... ʒij.
 Tr. ferri chloridi,
 Acid. hydrochlorici..... āā ʒss.
 Syr. limonis,
 Aquæ destillat..... q. s. ad. ʒvj.
 M.—S. ʒj every four hours, to adults.

Hydroleine has given him more satisfactory results than any preparation of cod liver oil on the market. Iodine he prefers to use externally.

TYPES OF INTERMITTENT FEVER.—In *Medical Progress*, Kenner gives his deductions from the study of over 3,000 cases of intermittent fever in Kentucky and Arkansas. He arranges these under the severely bilious type, the mild bilious, the cachectic, and that in which the paroxysms recur from habit.

In treating the first class, the author considers nothing so important as colocynth, with or without calomel. Quinine may be required afterward; and is the remedy for the second class. For the malarial cachexia, removal to a healthy climate is essential. Cod liver oil, arsenic, and iron are the best remedies. For the fourth class, he gives iron, arsenic, cold baths, and opium with capsicum to abort the paroxysms.

Medical News and Miscellany.

JERSEY pigs are afflicted with some unknown and fatal epidemic.

BRAZIL has established an institute for inoculations against yellow fever. Dr. Freire is in charge.

A **QUACK** doctor down South has gone to horse-stealing. Not a radical cure, but a decided improvement.

In the case of Madame Bonnemain, the treatment of phthisis by hypodermic injections of guaiacol proved a failure.

DR. WILLIAM CARTER, one of the resident physicians of the Philadelphia Hospital, has resigned, and Dr. Norcross has been selected to fill the vacancy.

A **CINCINNATI** journal publishes details of a "remarkable case" of necrosis of the maxillary bones that improved under daily doses of iodide reaching 200 grains. This may be "unprecedented" for Cincinnati, but has often been exceeded here. The patient, whose name was published, has a good case for damages against the doctor who "gave her away."

At present, thanks to Lady Dufferin's fund for supplying women physicians to the women of India, there are thirty-one well-qualified women physicians scattered throughout India, seventy-two missionary physicians practising, and nearly two hundred girls and women studying medicine in the Indian medical schools.

THE St. Louis College of Physicians and Surgeons reports 178 matriculants within the first ten days of the present term. This means a class of 250. Dr. A. C. Bernays has resigned the Chair of Anatomy, and has been succeeded by Dr. George Cale. *The Clinique*, under the able management of Dr. William Porter, shows evidences of prosperity.

THE President and Board of Directors of the Washingtonian Home have tendered a reception to Dr. Albert Day, in honor of his seventieth birthday, Thursday evening, October 15, 1891, in the parlor of the Home, 41 Waltham street, Boston, Mass.

The Association for the Study and Cure of Intebriety hold a public meeting in celebration of the same event, at the same time and place.

AMERICAN PUBLIC HEALTH ASSOCIATION.—The Nineteenth Annual Meeting will be held at Kansas City, October 20 to 24, 1891. The Local Committee of Arrangements announces that all the railway passenger associations of the country have granted a one and one-third fare-rate for the round trip on the usual certificate plan, that is:

1. Procure a certificate of attendance from the agent at the starting point by paying full fare to Kansas City.

2. Have the certificate of attendance signed by the proper officer of the association at Kansas City. This certificate will then procure return ticket for one-third fare.

All the leading hotels of Kansas City will give special rates to delegates. Arrangements are being perfected for an excursion into Kansas, as one of the features of the entertainment of the association. For any information as to the meeting, address Dr. E. R. Lewis, Chairman, or Dr. Joseph Sharp, Secretary, Local Committee of Arrangements, Kansas City, Mo.

DR. C. A. KINGSBURY died, last Saturday, at the age of seventy-two years. He had for many years been connected with the Philadelphia Dental College. He was a great fisherman, and one of the most genial of men.

THE INTER-CONTINENTAL AMERICAN MEDICAL CONGRESS.—The Committee on Permanent Organization of the Inter-Continental American Medical Congress, will meet at the Lindell Hotel, St. Louis, Mo., October 14, 1891. It is intended at this meeting to (1) adopt constitution; (2) elect permanent officers, domestic and foreign; (3) select time and place of meeting. Members of the Auxiliary Committees of the different States are invited to be present. Charles A. L. Reed, M.D., Chairman; J. W. Carhart, M.D., Secretary.

WEEKLY Report of Interments in Philadelphia, from September 26 to October 3, 1891:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Anæmia		1	Fever, typhoid.....	9	3
Aneurism of the aorta.....	2		Hemorrhage.....	1	
Alcoholism.....	1		Hernia.....	1	
Apoplexy.....	11		Homicide.....	1	
Bright's disease.....	11		Inanition.....		18
Burns and scalds.....	1		Inflammation bladder.....	1	
Cancer.....	10	1	" brain.....	5	10
Casualties.....	2	1	" bronchi.....	2	1
Congestion of the brain.....		5	" kidneys.....	5	1
Congestive chill.....	1		" larynx.....		2
Cholera infantum.....	23		" liver.....	2	
" morbis.....	1		" lungs.....	8	3
Consumption of the lungs.....	35	3	" pericardium.....	3	1
Convulsions.....	12		" peritoneum.....	2	2
" puerperal.....	1		" s. & bowels.....	8	6
Croup.....		6	Locomotor ataxia.....	1	
Cyanosis.....	3		Marasmus.....		18
Debility.....	1	2	Neuralgia of the heart.....	1	
Diabetes.....	1		Obstruction of the bowels.....	2	1
Diarrhoea.....	1	3	Old age.....	13	
Diphtheria.....		18	Paralysis.....	1	
Disease of the heart.....	15		Poisoning.....	2	
" kidneys.....			Rheumatism.....		1
Drowned.....	1	1	Septicæmia.....	1	
Dropsy.....		1	Softening of the brain.....	2	
Dysentery.....	3		Suicide.....	2	
Enlargement of the heart.....	2		Tumor.....	1	
Extra uterine foetation.....	1		Ulceration of the stomach.....	1	
Fatty degeneration of the heart.....	2		Wounds, gunshot.....		1
Fever, puerperal.....	2		Total.....	184	156
" scarlet.....	1	5			

HEALTH OF NEW YORK STATE DURING AUGUST, 1891.—Mortality reports from 138 cities, villages and large towns, having an aggregate population of 4,311,000, show the total number of deaths from all causes in August to have been 8,913, making a death rate per thousand of 24.34 per annum; in July the death rate for the same places was 25.00, and in June, 22.78; 50.4 per cent. of the deaths in these localities were under five years of age, and 31.0 per cent. of the deaths were from zymotic diseases, 23.3 per cent. being from diarrhoeal diseases; nearly one-fourth of the total urban mortality. Of 1,800 deaths occurring in rural districts, 28.0 per cent. were of children under five years of age, and 23.0 were from zymotic diseases, 18.5 being from diarrhoea. For the State, these proportions vary little from the average for six years, the zymotic and diarrhoeal mortality being a little lower than the average. Typhoid fever shows the usual increase, which always begins in August and continues through the fall months; the increase over July is chiefly in the maritime district, which ordinarily has a lower death rate from this cause than the other sanitary districts. There were fewer deaths from scarlet fever, measles and diphtheria than in July, and a moderate increase from whooping-cough. There were more deaths than usual from accidents, chiefly from drowning and railway injuries.

LORENZ REICH'S TOKAYER AUSBRUCH.—Apart from the mere question of purity, good wine is, perhaps, a matter of taste; nor is this a matter of fashion, but of good judgment; and if we find that a kind has received the commendation of *connoisseurs*, we may at least try it with confidence.

No wine has awakened more enthusiasm than "the melted topazes squeezed from the grapes of Hungary," as the Autocrat of the Breakfast Table phrases the glowing Tokay of Mr. Lorenz Reich, whose great family hotel, "The Cambridge," at the corner of Fifth avenue and Thirty-third street, is one of the wonders and blessings of New York.

His cellars contain many rich brands; but best of all is the beautiful Tokayer Ausbruch, and letters from hundreds of well-known pens testify to the delight it has given. Both Garfield and Grant, in their last illnesses, were sustained by it, and by President Arthur and his White House guests no wine was better enjoyed, if we may believe letters from a score of Cabinet ministers, senators, and high officials.

Mme. Adelina Patti wrote to Mr. Reich that she had tasted Tokayer Ausbruch at its birthplace, and only at his table drank its equal. Mr. Gladstone and Lord Coleridge unite in praising it. Salvini is certain it would prolong his life if he could always obtain it, and Dr. Holmes said it put the warmth of summer into his autumn veins. Robert Browning forsakes all obscurity in its praise. J. Russell Lowell thought if he could mix it with his ink he should write "something worth having," and Longfellow says: "Neither king nor kaiser ever tasted better; it is delicious." Henry M. Stanley also wrote to Mr. Reich: "It is a rare gem among wines, which has never been excelled." Cardinal McCloskey wrote to Mr. Reich: "You deserve to be regarded a public benefactor," and the most prominent physicians have affirmed the purity and high medicinal excellence of this wine. "It furnishes a reliable strength-producer and health-promoter," was the opinion of Dr. Willard Parker. And so said Prof. Gross.—*Home Journal*.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending October 1, 1891.

TURNER, THOS. J., Medical Director. Placed on the Retired List, September 21, 1891.

HALL, J. H., Surgeon. Placed on the Retired List, September 25, 1891.

BOYD, J. C., Surgeon. Ordered to duty on Naval Medical Examining Board.

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The Times and Register.

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Original Articles. ACTION OF THE AMIDE-GROUP ON THE WASTING ANIMAL ECONOMY.

CONTINUED BY PROF. SAMUEL G. DIXON, M.D., Academy of Natural Sciences, of Philadelphia.

IN carrying out the physio-pathological experiments by the subcutaneous injection of the respective members of the amide-group into the wasting animal economy, kreatin was followed up by taurin, with the results shown in the accompanying report, made by Dr. Zuill, Professor of Veterinary Surgery in the University of Pennsylvania.

To Prof. Samuel G. Dixon, M.D. October 9, 1891.

DEAR DOCTOR:—I hereby submit to you the clinical results obtained from the subcutaneous injection of taurin into tuberculous cattle.

The experiments were made as nearly in accordance with your request as was possible; however, the stock under my control for the purpose was not as satisfactory as I would have liked.

Experiment No. 1A, was made upon a full-grown heifer, that was previously used for the purpose of testing the action of both tuberculine and kreatin, therefore you will not look for as marked reaction as would likely take place under other conditions.

Treated with 1/2 grain of taurin.

TEMPERATURE.			
10 A.M.....	102.0° F.	7 P.M.....	104.0° F.
1 P.M.....	102.2° "	8 ".....	104. " "
2 ".....	102.2° "	9 ".....	104. " "
4 ".....	102.2° "	10 ".....	103.8° "
6 ".....	104.2° "	11 ".....	103. " "

Control Experiment No. 1A, unfortunately, had to be made with a healthy steer, only six months old, which fact, for obvious reasons, rendered the result less satisfactory than it would have been with a full-grown animal.

Treated with 1/2 grain of taurin.

TEMPERATURE.			
10 A.M.....	101.6° F.	6 P.M.....	102.0° F.
1 P.M.....	101.8° "	8 ".....	103. " "
2 ".....	101.8° "	9 ".....	103. " "
4 ".....	101.8° "	10 ".....	101.8° "

Experiment No. 2A, was made upon the same tuberculous heifer as was Experiment No. 1A, therefore you would not look for as high a reaction as that shown by the first injections, particularly when followed up in such close succession. Treated with 1 grain of taurin.

TEMPERATURE.			
10 A.M.....	102.2° F.	5 P.M.....	102.6° F.
12 M.	102.2° "	6 ".....	103. " "
2 P.M.....	102.2° "	7 ".....	103.8° "
4 ".....	102.4° "	8 ".....	103.6° "
		9 P.M.....	103.2° F.

Control Experiment No. 2A, was made on the same healthy cow as Experiment No. 2 of September 4, 1891. Treated with 1 grain of taurin.

TEMPERATURE.			
10 A.M.....	101.8° F.	5 P.M.....	101.6° F.
12 M.	102. " "	6 ".....	101.6° "
2 P.M.....	102. " "	7 ".....	101.6° "
4 ".....	101.8° "	8 ".....	101.6° "
		9 P.M.....	101.6° F.

Experiment No. 3A, was made with the same tuberculous heifer that I have been using to test the reaction of both tuberculine and kreatin, which renders the animal less susceptible to the action of taurin. Treated with 1 1/2 grains of taurin.

TEMPERATURE.			
9.45 A.M....	101.4° F.	5 P.M.....	103.0° F.
12 M.	102. " "	6 ".....	103. " "
2 P.M.....	102.4° "	7 ".....	103.6° "
3 ".....	102.8° "	8 ".....	103.2° "
4 ".....	102.8° "	9 ".....	102.8° "

Control Experiment No. 3A, was made on a healthy cow, by treating her with 1 1/2 grains of taurin.

TEMPERATURE.			
9.45 A.M....	100.8° F.	5 P.M.....	102.0° F.
12 M.	100.8° "	6 ".....	102.2° "
2 P.M.....	100.8° "	7 ".....	102.2° "
3 ".....	102. " "	8 ".....	101.6° "
4 ".....	102. " "	9 ".....	101.6° "

Hoping to have some new cattle for the next of the amide-group, I remain,

Very truly, W. L. ZUILL.

FOUR OPERATIONS FOR APPENDICITIS:
THREE RECOVERIES, ONE DEATH
FROM A VERY SMALL CON-
CEALED ABSCESS.¹

By W. W. KEEN, M.D.,
Professor of Principles of Surgery, Jefferson Medical College.

CASE I.—*Recurrent appendicitis; operation, after the fifth attack (with perforation and general peritonitis), by median and lateral incisions; recovery.*—Miss B., aged thirty years, a slender, frail woman. A year ago she developed a moderate lateral curvature of the spine through muscular weakness. Her father died of cancer of the bowels; her mother is living, and is even more delicate than herself.

About fifteen years ago she had her first attack of perityphlitis. A few years later a second occurred, and about six years ago a third, which was the first in which I saw her. The attack was not severe, no suppuration followed, and after its subsidence she seemed as well as usual.

On May 31, 1890, she was suddenly taken with severe paroxysmal pain in the lower part of the abdomen, accompanied by vomiting. The attack was attributed to the eating of some strawberries, and when the bowels were subsequently moved by small doses of calomel a quantity of strawberry seeds was passed. The pain was relieved by morphine. There was slight general tenderness, not limited to the right iliac fossa. The temperature only rose to 101°. The attack gradually passed away, and in two weeks she was able to return home. For the account of this attack I am indebted to Dr. W. H. Morrison, who attended her. The symptoms rather pointed in his mind to an ordinary intestinal colic from the fruit, though as there had been prior attacks of perityphlitis the right iliac fossa was watched with some care; but no special dullness or tenderness existed there, nor was there any induration. There had been no chill.

The summer of 1890 was passed in comparatively good health. As soon as I returned from my summer holiday I was asked to see her by my assistant, Dr. W. J. Taylor. He had diagnosed not only a renewed attack, but also a probable perforation of the appendix on the day of my return. She had been constipated for several days, and a slight movement of the bowels on September 30, 1890, due to divided doses of Epsom salt given the previous evening, was followed by symptoms of peritonitis over the entire lower abdomen, the tenderness in the left iliac fossa being possibly even more marked than in the right. The induration was only moderate. Exploration by the rectum revealed general tenderness of the pelvic viscera with diffused induration, but no fluctuation. A vaginal examination could not be made. It was clear that perforation had taken place and that immediate operation was needful.

When I first saw her on the evening of October 1st, the symptoms, while clear, were not very urgent, and Dr. Taylor and I felt it safe to postpone the operation until the next day and so avail ourselves of daylight. The peritonitis was clearly local in the pelvis and lower belly and did not involve the entire peritoneum, and the depression and shock were not so great as to require instant interference.

Operation, October 1, 1890.—The hair was shaved and the field of operation thoroughly disinfected. In view of the involvement of both iliac fossæ I deemed it best to make an incision in the middle line. As soon as the abdominal wall was penetrated pus began

to exude very abundantly, and I estimated that over a pint escaped. The omentum was glued to the belly wall, and the pelvic viscera, including the intestines, were all glued together by adhesions, except where they were separated from each other by pus.

The appendix was at once sought for. It was firmly bound in place, as thick as a good-sized thumb, and so turgid that it was erect. It could not be brought to or even near the opening, and accordingly another oblique incision was made in the right iliac fossa, through which it was approached very readily. As soon as seen it was discovered that there was a small opening at its tip, through which the intestinal contents were escaping. With some little care it was freed from its adhesions, tied one-fourth of an inch from the cæcum, and removed. The stump was then disinfected and invaginated into the bowel, the peritoneal coating of which was secured by four Lembert stitches. The entire abdominal cavity was then thoroughly flushed with hot water. Two drainage-tubes of glass were inserted, one in each incision, and the wounds closed. I sought to carry the drainage-tube in the middle line into Douglas's cul-de-sac, but this could not be found, as it was obliterated by adhesions. The drainage-tubes were emptied by a long-nozzled syringe whenever full.

December 17, 1890.—In the twenty-four hours after the operation, without laxatives, her bowels were moved twelve times, and for a week afterward from two to four or six times a day in small quantities, semi-solid. The bladder was emptied most of the time by catheter. Her temperature, which two days before the operation had reached 103°, fell immediately after the operation to 101.6°, and four days after the operation had reached the normal. By the end of a week it had gradually climbed again to 102°, and on that day she had a severe "sinking spell," with much pain, cold perspiration, and excessively weak pulse. This was met by prompt administration of stimulants and digitalis, and in forty-eight hours her temperature had fallen about two degrees. Meantime her bowels continued to trouble her very greatly, with pain and frequent movements. Examination by the rectum showed the pelvic viscera to be matted together in a hard mass, which pressed upon the rectum and gave great annoyance. Until the eighteenth day after the operation her temperature fluctuated very markedly from normal, or a little above, to 101° and 102°, but on the nineteenth day, coincidentally with the improvement in the bowels, her temperature sank to the normal and remained such during the remainder of her convalescence. In fact, most of the time it was half a degree below normal.

Meantime the median wound gaped open to the extent of over an inch in consequence of the sloughing out of the stitches, but by the time it had gaped open a layer of granulation had sprung up on the omentum, which lay at its bottom, and without any interference other than the daily re-dressing—sometimes several times a day when the discharge was considerable—it slowly healed, and by the end of five weeks was entirely closed by a firm cicatrix. The drainage-tube was removed at the end of ten days, when there was no further discharge through it. The lateral wound healed without incident at the end of ten days.

After the lapse of three weeks from the operation her progress was slow but steady. A month after the operation she first sat up out of bed.

September, 1891.—There is a slight tendency to a ventral hernia at each incision, for which she uses a binder. Her menstruation is regular and not specially painful. Examination of the pelvic viscera by the

¹ Read at the Philadelphia County Medical Society, September 28, 1891. For Discussion, see page 316.

rectum shows them to be mobile and free from adhesions.

CASE II. *Perforative appendicitis of a week's duration; temperature of only 99° in spite of a large abscess; operation; recovery.*—H. T., male, aged forty-two years; admitted to the Jefferson College Hospital, February 11, 1891, at the request of Dr. C. M. Ellis, of Elkton, Md. Family history negative. He was taken ill on February 4 with pain all over the belly. This was not located in the right iliac fossa until two days later. His fever had run up to 102° and 103°. There was tumefaction in the right iliac fossa, but no œdema. There was resistance to touch, parallel with Poupart's ligament, and filling up half of the space between Poupart's ligament and the umbilicus. The point of greatest tenderness was one inch below McBurney's point. On the evening of his admission his temperature was only 100°, and was no higher the next morning. On the evening of the second day, however, the temperature rose to 101.2°, falling the next morning to 99°. Finding that the vesperal rise of temperature continued, and that a week had elapsed, I determined at once to operate. This was done in the public clinic.

An oblique lateral incision was made parallel to Poupart's ligament, which immediately liberated a large quantity of very foul smelling pus. The appendix was found to be swollen to about the size of the thumb, with a distinct perforation of the diameter of a knitting-needle at its extremity. The appendix was tied and cut off. A second smaller abscess cavity was found at a deeper level than the first, the pus from which was much more fetid than that from the first. The cavity was then thoroughly washed out with a sterilized salt solution, a drainage-tube was inserted, and the center of the incision united by a few stitches. Practically, these might well have been omitted, for at the end of three weeks, in order to secure free drainage of the wound it was necessary to lay open this adherent skin. He went home with a small, almost healed ulcer nine weeks after the operation. The highest temperature was 102.2°, on the sixth day.

CASE III. *Appendicitis from a fecal concretion; pus in the general peritoneal cavity; operation ninety to ninety-six hours after inception of the disease; recovery.*—J. S., a French lad, aged nineteen years; admitted to the Jefferson College Hospital, February 28, 1891. Four days before this he was in perfect health and at his work as a waiter in a restaurant. He had never had a similar attack. On that day he was seized with cramps all over the belly. By the next day the pain had become fixed in the right iliac fossa, and I was called to see him on the morning of the fourth day by Dr. J. C. Wilson, who had been called in on the previous evening. When I entered the room the tears were rolling down his cheeks, and he was groaning and writhing with pain. The bowels had been opened on the day of the attack, but not since. On the evening of the third day the temperature was 103°, and on the morning of the fourth day 101°. There was tumefaction parallel to Poupart's ligament, about three fingers' breadth in width, and the anterior wall of the belly and right side was tense, elastic and resistant to the touch. It was extremely tender, and he indicated by one finger the tenderest spot at McBurney's point and one inch below it. The right leg was flexed to relax the belly wall. There was dullness on percussion, and a rectal examination showed considerable induration and obscure fluctuation. There was no œdema. There had been no vomiting.

As quickly as possible arrangements were made to operate, and the operation was done before the class two hours after I first saw him with Dr. Wilson, as nearly as could be determined, between ninety and ninety-six hours after the attack. The incision was parallel to Poupart's ligament. Although there was no external œdema, as soon as I cut through the aponeurosis of the external oblique, there was marked œdema of the tissues beneath this aponeurosis. At a greater depth a quantity of extremely fetid, very thin pus gushed out, and on washing out the cavity with a salt solution, I found an evidently gangrenous mass, with a knobbed free end, which looked like the appendix bound down by adhesions. A piece of the omentum was attached to it, and the appendix was distended; but clearly not perforated. It was ligated and cut off. Upon opening the amputated portion, I found a fecal concretion as large as a bean. So far as gentle manipulation could determine, there seemed to be no adhesion of the bowels to each other, and apparently the pus was contained in the general peritoneal cavity. This was well washed out with hot water and closed, and a drainage-tube was inserted. The patient made a rapid recovery without any serious complications whatever, improving from the very moment of operation. He went home in three weeks entirely well.

CASE IV. *Perforative appendicitis; pain below the ribs; laparotomy; death; concealed small abscess behind the colon.*—Mrs. F., an American, aged thirty years, was first seen at 11:30 P.M., June 27, 1891, with Dr. Seitz. She had married at fifteen, and has had four children, the last three years ago. She has been perfectly regular, the last sickness coming on a week too early, ten days ago. A week ago she was suddenly seized with violent pain just below the right border of the ribs. A day or two later one of her children struck her accidentally over the same spot, producing intense pain. Five days ago she was seized with an aggravation of the pains, and was in such a condition of collapse that Dr. Seitz feared she would die. Her temperature was below 97°. Active stimulation soon relieved this; but the pain continued almost as severe as before. Another attack of collapse to-day, with cold extremities up to the knees and elbows, induced Dr. Seitz to call me in consultation. I found a slender, delicate-looking woman, with the right leg drawn up, and the right side of the abdomen excessively tender, with the muscular wall of the belly very tense. The slightest touch on the entire right side of the abdomen produced the most severe pain. On the left side moderate pressure was pretty well borne. The pain was most severe just below the border of the liver, diminishing gradually toward the right iliac fossa. The uterus and ovaries, by vaginal touch, were free from pain and swelling.

At the consultation it was decided to give her hypodermics of morphine, with brandy and milk, and in the morning, if she was not better, to do an exploratory laparotomy.

June 28, 11 A.M. The pain continued as bad as before, with the extremities cold, and pulse irregular—92 to the minute—respiration 24, temperature 97.4°. An exploratory laparotomy was done, the incision being at the border of the right rectus. The diagnosis had been that of appendicitis or some indeterminate trouble with the liver or gall-bladder. The kidney did not seem to be tender. On opening the abdomen the lower border of the liver was seen, and was evidently somewhat reddened and fleshy-looking. This was bound to the colon by recent adhesions, and the peritoneum of the corresponding belly wall

was deeply injected. The gall-bladder was normal, and there was no evidence of trouble behind the colon (see "Remarks" below) or with the kidney. No abscess or other cause for the inflammation could be detected. The right iliac region and caput coli showed no disease, but the appendix was not found. There was a considerable accumulation of serum in the right flank. The intestines were normal, also the uterus and the right ovary. In the left ovary was a small cyst. The abdomen was well flushed with warm water, and reluctantly closed after inserting a drainage-tube in the affected area. I felt assured that I had not discovered the reason for her dangerous illness.

4 P. M. She was much more comfortable than before the operation, and her extremities, though not warm, were much less cold.

29th. She passed a poor night, with constant bilious vomiting. Temperature 97.4° , extremities again cold. We ordered one-quarter of a grain of cocaine every hour and a full enema with glycerine, followed, if need be, by an enema of two drachms of sulphate of magnesia every two hours.

6 P. M. Temperature 98.2° , pulse 92, respiration 24. Has had four large stools and feels much more comfortable. The belly is not nearly so tender. The vomiting ceased with the first dose of cocaine, and she feels hungry. A moderate amount of bloody serum had escaped by the tube, which was now removed. A considerable amount of apparently purulent, leucorrhœal discharge had occurred during the day.

July 2. From the time of the last note she gradually sank, with symptoms of collapse, subnormal temperature, and constant vomiting, until she died, at 9 P. M. on the 30th.

The post-mortem, thirteen hours after death, disclosed the fact that her death was caused by a perforative appendicitis. The appendix was three inches long and lay directly behind the cæcum and colon, being agglutinated to them, with no peritoneal covering, but lying between the two layers of the meso-colon. Its tip was perforated.* Less than two drachms of pus mixed with a small amount of fecal matter were found in the abscess. The wound itself and the peritoneal cavity were entirely aseptic.

REMARKS.—I record this case especially as a lesson in diagnosis and a warning in treatment. When first called to see it, the history, the collapse, the rigidity of the right side of the belly and the flexure of the right leg all betokened an appendicitis. And yet the right iliac fossa was free from tenderness, free from tumor, free from œdema, free from pain. There was slight pain and tenderness all over the right half of the belly, but the most painful spot was far away from McBurney's point and was just under the border of the liver and about an inch inside the line of the anterior superior spine. The abdomen at this point over an area of 2.5 to 3 inches was so exquisitely tender that no satisfactory examination could be made. Although appendicitis was in my mind as a first thought, the position of the tenderness suggested possibly rupture of the gall-bladder from gall-stones, or a renal calculus as the probable cause. When the abdomen was opened the localized patch of peritonitis was external to the attachments of the meso-colon, and showed no indication of any trouble back of the colon as its possible cause. In spite of this, however, I examined three several times with the most minute care, the entire region of the colon from the cæcum to the hepatic flexure; first on its outer side, then on its inner side, and then by bi-manual examination

from side to side and by palpation from before backward, and could detect no hardness or other evidence of any abscess.

That no larger an amount of pus should have formed after an illness lasting eight days is very unusual, and while I deeply regret not having discovered the abscess, I cannot but console myself with the thought that it was not for the want of a careful and thorough search, but by reason of the unusual conditions and the small size of the abscess. Whether in the absence of all physical signs of such an abscess it would have been my duty to dissect up the colon in order to examine the retro-colic tissues and appendix, or to have torn through the outer layer of the meso colon, is a question I have much debated. Viewing now the facts I greatly regret not having done so, and I report the case especially as a guide and warning to other surgeons who may meet with similar cases.

REPORT OF CASES OF APPENDICITIS.¹

By JOSEPH PRICE, M.D.

THE first case I report from memory. It occurred in Ohio, eleven months ago.

CASE I.—A physician telegraphed me that he had a case of appendicitis of two weeks' standing, and asked me to come at once. I wired him that I would return by way of his city in five days. He permitted the man to remain quietly in bed. I saw him at the end of the twenty-first day, leaking, with a rapid, feeble pulse, and, I think, a subnormal temperature. The patient was twenty-seven years old, and previously had been a vigorous man. The abdomen was greatly distended, and there was marked fluctuation on both sides, below the umbilicus. There seemed to be a perfect inflammatory diaphragm at that point. He was placed on the table and a lateral incision made, and two gallons of muddy, pussy fluid escaped. The irrigator, twelve inches long, passed its full length, extending to the left iliac fossa. Two pitchers of water were used, and two large gauze drains with a glass tube between them were used. No stitches were used. The patient was put in bed, and made a rapid recovery.

CASE II.—Mrs. L., aged thirty-two years; married eleven years; no children; no miscarriage; patient of Dr. John T. Hampton. Appendicitis with perforating ulcer of cæcum; multiple pus-pockets; extensive adhesions to omentum, large and small bowel. Appendix removed. Perforating ulcer of cæcum freshened, as in vesico-vaginal fistula, and closed. Stump of appendix inverted. Irrigation and drainage, with speedy recovery. This patient had suffered recurring attacks, was greatly emaciated, feeble pulse, and slight elevation of temperature. She has gained over thirty pounds since the section.

CASE III.—Mr. H., aged forty-two years. Operation, May 5, 1891. Section for appendicitis. Pint of foul pus, fecal in odor; omentum and adherent loop ileum; irrigation, two tubes used in drainage; gauze drains. Discharged May 29, 1891.

CASE IV.—Mrs. N., aged twenty-five years. Eleven weeks since confinement. Operation, July 4, 1891. Appendicitis of eleven weeks' standing. Appendix removed. Adhesions to cæcum, bladder, and uterine walls all freed. Irrigation and drainage. Patient discharged August 6, 1891.

¹ Read at the Philadelphia County Medical Society, September 28, 1891. For discussion, see page 316.

CASE V.—Mrs. S., aged thirty years; married eight years. Painful, irregular, and profuse menstrual history; confined to her bed for the past fifteen months. Appendicitis, double pyo-salpinx. Operation, July 6, 1891. Removal of appendages and vermiform appendix; cyst of left ovary size of orange; universal adhesions separated; bowel stitched; six inches of ilium coiled and firmly adherent to uterus, bladder, and sigmoid. Left tube discharging through ilium; copious irrigation; glass and gauze drains. Discharged August 6, 1891.

CASE VI.—Miss W., aged twenty-eight years. Year previous had nephritis and cystitis; later had severe pain in right and left ovarian regions, paroxysms becoming more severe and frequent; pain at micturition and stool; catamenia gradually of shorter duration; loss of appetite, and insomnia. Operation, August 20, 1891. Appendicitis and double pyo-salpinx. Cyst of left ovary size of hen's egg; cyst of right ovary size of orange; adhesions universal. Appendix, distended by concretions and two drachms of fluid, firmly adherent to ilium. Clean removal of appendix and uterine appendages; irrigation and drainage. Discharged September 19, 1891.

CASE VII.—C. V., aged thirty-two years; married eight years; seven children; Polander by birth; resident Luzerne county, Pa. Last confinement, January, 1891. Acute mania, no assignable cause, probably puerperal. Indications of abdominal trouble for some time; went to bed July 23 with pain, tenderness in right iliac region; tympanitis. Section, August 14, 1891. Multiple pus sacs and extensive adhesions—omentum, ilium, bladder, and uterus; the pus-pockets extended from cæcum to bladder. Appendix completely disorganized and floating in a puddle of pus; freeing of all adhesions; irrigation and drainage; stump of appendix inverted; stitching of ilium and cæcum at disorganized points. She did fairly well for five days; died the sixth day. Post-mortem: Intestine in neighborhood of operation quite gangrenous; a general peritonitis. A large quantity of fetal pus in enlarged right inguinal canal, also in pocket between bladder and uterus.

Nomenclature.—The old terms were arrived at by examining old, neglected cases, often post-mortem. Recently but one term—appendicitis—is used before laparotomy, before post-mortem, because those two performances prove that so far as the gravity, intensity, and extent of the disease are concerned, the symptoms are unreliable, inadequate; further, abdominal sections and post-mortems have determined what the treatment should be—that is, surgical—under a surgeon from its inception; hence the name indicating and impressing the nature of the disease and the character of the treatment—that is, appendicitis surgicalis. Idiopathic peritonitis indicates nothing; is an empty term.

The terms typhilitis, perityphilitis, paratyphilitis, extra-peritoneal abscess of the right iliac fossa, are useless, except to indicate a secondary or late process originating, without exception, in inflammation of the vermiform appendix.

Symptoms.—The most constant and valuable signs are:

1. History of sudden onset.
2. The point of greatest sensitiveness to pressure, exactly localized over the base of the appendix.
3. Fever as indicated by the thermometer varies, usually low.
4. Rigidity of right abdominal muscles, constant.
5. Constipation.

6. Œdema, overlying a deep abscess, in the right iliac fossa in neglected cases.

7. Shock, more or less profound, usually occurs where perforation happens early and suddenly; it is followed by chill, vomit, etc.

There are no special signs of perforation if it takes place late, after adhesions have formed. If perforation occurs late and the adhesions are imperfect, we find shock.

The symptoms should be studied most carefully at the end of the first twenty-four hours.

8. Pain is misleading; often referred to epigastrium alone; to umbilical region sometimes; it is often slight.

9. Tympanitis is variable, it depends on state of the bowels; it indicates intestinal paresis—if it comes on rapidly it is unfavorable; it is often the result of opium.

10. Percussion not necessarily dull; there may be a tympanitic note from gas in overlying intestine.

11. Over-extension of right thigh gives pain.

12. Cough is avoided.

13. Tumor inconstant for first two days.

14. Pulse indicates severity and increase; it shows constitutional disturbance.

15. Chill and vomit inconstantly accompany the initial pain.

16. A prodromal stage of abdominal discomfort (about a week) is frequent.

17. Flexion of hip-joint not marked except in neglected cases.

The symptoms are not commensurate with the gravity—intensity fatality of the disease.

Diagnosis.—Early diagnosis is of the greatest importance in reference to treatment and result.

1. Find with tip of finger—using firm pressure—point of sensitiveness (exact point of greatest sensitiveness); it will be, in an adult, one and a half to two inches inside the right anterior superior spinous process of the ilium, on a line drawn from that process to the umbilicus—in children, according to size—less distant from the spine of the ilium. (McBurney, confirmed by Weir and others.)

2. Rectal examination is of no value early.

3. Difficult to diagnose in the first twenty-four hours, because few symptoms present.

4. Subjective pain is of little or no value.

5. Constitutional symptoms are far inferior to local signs in forming an accurate diagnosis.

6. Have patient cough.

7. The hypodermic needle should never be used as an aid to diagnosis.

8. Medical men (physicians) no longer diagnose these cases—in the start—as simple obstruction of the bowel.

9. Diagnosis by exclusion is the only safe method.

10. The important points—after the disease has been pronounced appendicitis—is to diagnose it as an operative or a non-operative case.

Points in Deciding Operative or Non-operative Character of the Case.—1. Do not operate on the first day—usually—because the number of mild cases is undoubtedly large. One operator (McBurney) saw thirteen cases in one year too mild for operation.

2. If nausea disappears in twelve hours; if tenderness on pressure not increased in twelve hours; if temperature normal, or not above 100° in the mouth; if pulse normal, or but little accelerated; if patient moves in bed with ease; recovery without operation probable.

Prognosis.—No positive prognosis can usually be given in the first twelve hours. If wait for “strong

evidence" of perforation, abscess, general peritonitis, rapid, weak pulse, anxious respiration, distension of abdomen, though the operation is made, the patient will not recover.

Surgery has sometimes been successful even where there has been :

- (a) General suppurative peritonitis.
- (b) Septic paresis of the intestines.
- (c) Multiple abscesses in the peritoneal cavity.

Such cases as these usually die, are hopeless.

Where there is no exhaustion, no general sepsis, no debility from long abstinence from food, no prolonged vomiting, the prognosis is good.

It is a serious, often a difficult, operation.

"Abscess, wherever it is, and however well it may appear to be surrounded by protecting plastic deposits, is a constant menace to life, as evidenced abundantly by its spontaneous opening into the abdominal cavity, the venous canals, the bladder, and the chest cavity, as well as externally and into the intestinal canal."—

Prof. Bridge.

Pus will form whether there be perforations or none : 145 autopsies had pus (Matterstock) ; 125 autopsies showed pus (Fenwick, quoted by Keen) ; 100 autopsies had pus (Weir, quoted by Keen).

Sepsis is hopeless for medicine, nearly hopeless for surgery.

Sepsis begins before the end of the third day as a rule.

Death from sepsis on the third, fourth, or fifth day is the rule.

The prognosis as to day of death, without operation, in perforative cases is one-third die between the second and fifth day.

Proof of 176 cases : 8 cases died on second day ; 28 cases died in first three days ; 46 cases died in first four days ; 60 cases died in first five days. (Fitz.)

Experience shows no danger existing of infecting the healthy peritoneum in the course of an operation on the appendix.

Essentials of Operative Success External to the Patient.—For success the operation requires certain conditions external to the patient, namely :

1. General surgical skill.
2. Good assistants.

Time of Operation.—"No cases in surgery, saving, perhaps, hemorrhage from large wounded vessels, require more prompt interference" (surgical).—*Keen.*

But one out of twenty-three early laparotomies died (McBurney).

"By waiting till the seventh, eighth, or ninth day to operate, a majority only, all more or less dilapidated, will have passed many dangers ; not a few will be waiting the knife that they may start on the road to recovery."

Operate early (before sepsis begins), so the operation may not be an autopsy (says one of wide experience).

Not on the first day generally. At the end of thirty-six hours, if a tumor has formed ; if symptoms indicate increase in severity or extent of the disease. Before thirty-six hours, if sudden perforation.

If collapse or shock should be very profound, there may be need to stimulate and wait for reaction before operating.

Statistics of time of early operations : 24 cases (early laparotomies), 6 done on second day ; 14 done on third day ; 2 done on fourth day ; 2 done at the end of one week. Result, 23 recoveries, 1 death. (McBurney.)

Definition of Early Operation.—"By early laparotomy is meant operation before the pathological process has reached an advanced stage. It is not measured by time ; it is before

1. General septic peritonitis has begun.
2. Before pus has flowed freely into the pelvis.
3. Before complete septic paresis of intestine has set in."

An early operation is done at a time when the removal of an actually diseased appendix is capable of putting an end at once to an active disease, which has already become clearly defined and which threatens life.

Origin of Early Operation.—"The early stage operation, or the operation for recurrence, if not of exclusively American origin, has been developed and established by American experience," is true.

Kinds of Incisions.—A choice is to be made as to the kind of incision—that is, between

1. A free opening into the general peritoneal cavity.
2. An opening limited to evacuation of the contents of an abscess without exposure of the peritoneum.

When to Use the Different Kinds of Incisions.—The free opening into the general peritoneal cavity is used :

1. In quiescent state after recurrent attacks.
2. In early stage of progressive attacks, with or without abscess or general peritonitis.
3. In later stage, when abscess has formed in one of the rarer positions, and is not adherent to anterior abdominal wall.

The "limited opening" is done in later stage of affection for simple evacuation.

Sites for Incision.—There is a choice of site for free incision, as follows :

1. Median line below umbilicus (Gerster).
2. Outer margin of right rectus muscle below level of umbilicus (Sands).

There are several places at which the "limited incision" may be made ; they are :

1. Parallel to Poupart's ligament, about one inch above it, to above and beyond anterior spine of the ilium (Willard Parker's oblique incision).
2. Through floor of iliac fossa.
3. Through rectum.

When the Different Sites are to be Chosen.—The median line is chosen as the site for the incision in cases of doubtful diagnosis for special indications. The lateral incision is generally chosen for early operations. The oblique incision is made for well-developed abscesses, mainly adherent to the anterior abdominal wall (Réclus).

Advantages of the Different Incisions.—The lateral incision is preferred, because :

1. It lies directly over the root of the appendix.
2. It exposes the field of operation more favorably than the median.
3. It creates a shorter, a less exposed line of drainage.

The advantages of the median incision are :

1. Greater probability of not encountering adhesions between the anterior wall and the intestines, in the line of incision.
2. Easier access to all parts of the peritoneal cavity for washing and for drainage.

Instruments.—Of the instruments to be used, they are but those needed in other major operations.

Adhesions, Limiting.—Adhesions make appendicitis a local, circumscribed disease ; make it an intra-peritoneal disease generally, always. When they are absent a diffused mischief is the consequence.

Adhesions Prevent Resolution.—They are left by an attack that apparently ends in recovery, render resolution an absurd term.

Adhesions Cripple Organs or Parts.—They may bind appendicitis to :

1. Parietal peritoneum.

2. Omentum.
3. Intestines.
4. Vessels.
5. Itself.

6. In short, to any or all surrounding structures.

Adhesions Cause New Trouble.—When slightly provoked they set up new trouble.

Adhesions Cause Strangulation.—They lead to strangulation of omentum, bowel, etc.

Adhesious, Frequency of.—Thirty-five per cent. of all post-mortem examinations made show them (Toft).

Of 26 cases 6 cases had no adhesions, 6 cases had slight adhesions, 6 cases had marked adhesions—that is to say, $76\frac{1}{3}$ per cent. of the 26 cases had slight, medium, and marked adhesions (Weir).

Adhesions, Treatment of.—Free adhesions by finger.

Treatment, by Whom.—The physician shares responsibility with the surgeon as early as possible. From the inception of the disease, through the operation to the end, the surgeon and physician should not be separated; they should see the case together.

Treatment, Washing.—It has been asserted that hot water is:

1. Not stimulation.
2. Not cleansing in irrigation.
3. Its use soon followed by depression, marked.
4. Its contact with the peritoneum injurious.
5. That sponging is more quickly done than irrigation; that it being impossible to cleanse hands with soap, water, brush, "rinsing (irrigation) is ridiculous."

The above statements are false.

Treatment Where Pus is Found.—If pus is found open pockets, wash out abscess cavities, seek appendix, tie, cut off, invert, cover with or by Lembert's sutures through the outer layer of cæcum, pack space between incision and abscess with gauze and iodoform, drain by rubber tube or rubber and glass; partly close wound, withdraw packing from between intestines on first or second day; withdraw tube and remainder of packing when circumstances indicate.

Treatment, Counter-drain.—Counter-opening for drainage in flank, above crest of ilium, or through rectum, or where a sinus.

If Little Trouble Found.—The removal of a but slightly diseased appendix cuts off the possibility of a recurrence, is a good thing.

Where Nothing Found, i. e., an Exploratory Operation.—"Exploratory operations will result in fewer deaths by far than the expectant delay which has heretofore been the general rule" (Keen).

Exploratory operation "carries with it less danger than the disease;" it has but few risks.

Treatment of Stump.—To sear mucosa of stump with pure carbolic acid or Paquelin's cautery is lowering an already devitalized part.

To ligate appendix; invaginate stump, suture after Lembert, is the good way.

Site of Origin.—The disease originates in the appendix (McBurney and McMurtry).

Seat of Perforation.—The point of perforation is usually at the free end of the appendix; sometimes the whole part is amputated.

Perforations, Frequency of.—Of 146 cases (Matterstock), 132 cases (60 per cent.) had perforations; of 129 cases (Fenwick), 113 cases (86 per cent.) had perforations; of 100 cases (Weir), 34 had perforations; 200 per cent. of Kümmel's cases had perforations.

Causes of Appendicitis.—The causes of appendicitis are:

1. Irritating substance, as foods, concretions, foreign bodies.

2. Congenital stricture, occasionally.

3. Strictures at the proximal end, due to ulcerations.

Concretions, Fecal, Frequency of.—Of 146 cases (Matterstock), 63 had fecal concretions; of 8 cases (Stimson), 1 had fecal concretions.

Size of Foreign Bodies That May Enter Gerlach's Valve.—Foreign bodies must be small to pass Gerlach's valve and enter the appendix, thus: A cherry-pip may pass with difficulty; a plum-stone may not enter. And autopsies teach surgery.

Multiple Pus Cavities.—That there are frequently multiple pus cavities, proof: One case (Mi-ku-licz) had six pus pockets, opened by three incisions; another of his cases had three pockets which were opened by incisions.

Ileo-cæcal Abscesses.—They also show ileo-cæcal abscess, proof: Of 106 cases (Krafft), 84 had autopsies, 84 had ileo-cæcal abscesses.

Points at Which Cysts or Abscesses of Appendix May Empty.—They prove that the abscesses or cysts do and may empty (a) into the abdominal cavity (b) into cæcum through Gerlach's valve (c) into rectum, (d) through Pettit's triangle; (e) above Poupart's ligament. (f) Into ischio-rectal fossa; (g) into a coil of intestine; (h) through crural ring; (i) into a venous canal; (j) into œsophagus; (k) into lung.

Progress of Appendicitis.—They (laparotomies and autopsies) show three distinct panoramas of progress in the disease.

Picture 1 of Progress.—(a) Irritating substance, catarrh of cæcum, or appendix, or both, dilatation of appendix primarily or following dilatation of cæcum, contents of bowel enter appendix, fluids are absorbed, solids are left, concretions are formed, and act as mechanical causes for inflammation, ulceration, upon which follows amelioration, or relapse, perforation, sepsis more or less extensive, operation or death.

Picture 2 of Progress.—(b) Irritation, catarrh of cæcum, or appendix, or both, gangrene, obliteration or ulceration, stricture of proximal end during healing of ulcers, distal end patulous, retention sac or cyst forms, which inflames, which empties into cæcum rectum backward, peritoneal cavity, etc.; peritonitis arises, adhesive or local, or universal, quiescent, recurrence, connective tissue becomes involved, omentum, intestines, etc., fixed by adhesions, and possible strangulation of omentum, intestine, etc.; knife ligature, irrigation drain, must be used or death occurs.

Picture 3 of Progress.—(c) Foreign body; pressure, atrophy, necrosis of epithelium, ulceration, perforation, etc.; knife and its associates, or death.

Kinds or Classes of Appendicitis.—The post-mortem, the section shows variations in the late or secondary process of appendiceal inflammation, which have been classified variously.

Prof. With subdivides the disease as follows:

1. Peritonitis appendicitis adhesion.
2. Peritonitis appendicitis localis.
3. Peritonitis universalis.

His classification has been largely endorsed, and is recognized under slightly changed names.

Bull distinguishes between:

1. Catarrhal perityphlitis.
2. Suppurative perityphlitis.

Mikulicz classifies it as:

1. Diffuse septic peritonitis.
2. Progressive fibro-purulent peritonitis.

Keen makes five classes, according to progress:

1. Mild form, without perforation, usually no abscesses.

2. Perforative (a) severe, early, fulminant; (b) mild early, suddenly bursts, etc.

3. Perforative, with comfortable abscess, rupturing into hollow viscus, or operated upon.

4. Abscess forming slowly, chronic, weeks, months, years.

5. Recurring.

The sum of all is (McBurney's) operative, non-operative appendicitis.

Previous Attacks.—Of 106 cases (Krafft), 24 had previous attacks in one to twenty years; 23 per cent. had previous attacks.

Number of Attacks.—One case (McBurney) had twelve attacks in one year. One case (Treves) had fourteen attacks.

Frequency of the Disease.—Thirty-five per cent. of all post-mortems show residua of appendicitis; 36 per cent. (over one-third) of 300 autopsies done at random, revealed diseased appendix (Toft). One case of perityphlitis to 100 of appendicitis (McBurney). Assume that one-third or more of all adults have one or more attacks (Keen).

Sex Most Frequently Attacked.—Of 14 cases (Mynster), 1 was a woman; of 24 cases (McBurney), 21 were males, 3 females.

Age at Which it Most Frequently Occurs.—Of 72 cases (Matterstock), 2 were under two years; 10 were between two and five years; 25 were between five and ten years; 35 were between ten and fifteen years. Of 228 cases (Fitz), 173 cases were below thirty-one years; 207 cases were under forty-one years. Of 24 cases (McBurney), 24 were under thirty-six years. Of 14 cases (Mynster), 1 was under twelve years; hence it is a disease of early life.

Results.—The operation can be done by different individuals under varying conditions, with something like uniform success; proof, the work of Sands, Stimson, Weir, Bull, Senn, Morton, Treves, Hartley, Mynster, Dalton, McBurney.

Medical and Conservative Mortality.—Morality under conservative treatment is large—larger than statistics can prove—for in many fatal cases the origin is unsuspected. Proof: Fitz puts it at 26 per cent.; Stimson puts it at 25 per cent. Of 72 cases, 74 per cent. recovered (Fitz). Of the 72 cases about 36 were treated medically, and 11 per cent. died, and 14 per cent. spontaneously evacuated the pus late (Fitz). In medical cases the mortality is now 44 per cent.

Mortality from Early Laparotomy.—Of 24 cases of early laparotomy (McBurney), 23 recovered, 1 died. Of 35 cases of early operation (Weir), 34 recovered, 1 died.

Mortality from Delay.—For one operation done by mistake ten deaths can be shown from waiting for signs of tumor or peritonitis.

Acute Mischief after Quiescence.—Of 30 cases of acute perforative appendicitis where recurrence was noticed, 22 cases exploded into abscesses or general peritonitis before the third attack; 1 case so exploded after the fifth attack.

Value of Medical Treatment.—Medical treatment—i. e., rest and intelligent nursing—is of twofold value.

1. In limiting the extent.

2. In shortening the duration of mild attacks.

Items of Interest.—Avoid deep epigastric artery and vein in making lateral incision.

A Point in Identification.—The anterior bundle of unstripped muscles on the colon, which terminates at the base of the cæcum, is in sight: it is a good guide to the appendix.

Abnormalities.—Anatomical relations of the appendix are sometimes abnormal; it was once found to

left of median line, above umbilicus, with a short mesocolon.

What is Recovery Without Operation?—Recovery without operation means relief from recurrent pain, and thereafter an improved condition of health for a longer or shorter time (Weir).

Definition of Obliteration of Appendix.—Obliteration of the appendix is narrowing of the appendix, which often follows catarrh of the part.

Percentage of Obliteration of Appendix.—Of 26 cases, 10 gave obliteration.

Why Arrays of Statistics?—The object of bringing statistics, percentage of recoveries, etc., before physicians is that they may realize importance of prompt operation (Vander Veer).

Where Pettitt's Triangle.—Pettitt's triangle is between the latissimus dorsi and the external oblique muscle.

Period of Activity in Literature of Appendicitis.—Much has been written on appendicitis in the last twelve years (1879 to 1891).

Period of Active Work in Appendicitis.—Much work in appendicitic trouble has been done in the last two years (1889 to 1891).

Literature.—*Buffalo Medical Journal*, 1879; Transactions of American Surgical Association; Volkmann's Klin. Vorbräge, January, 1889; *Annals of Surgery*, October, 1889; *New York Medical Journal*, October 25, 1890; Transactions of Medical Society of the State of New York, 1891; Transaction of American Physician, 1886; *Medical and Surgical Reporter*, February, 1886; *Medical News*, March 1, 1890; *Lancet*, 1889.

The above articles have been read and other in preparation for this paper.

Some of those to whom this article is indebted, and who have largely contributed to the biography of appendicitis, are the following: Drs. Abbe, Buck, Bull, Dalton, Edebohls, Fenwick, Fowler, Fitz, Gerster, Hartley, Hektoen, Holgh, Hadra, Holmes, Krafft, W. W. Keen, Lange, Morton, McBurney, McMurtry, Mikulicz, Mynster, Matterstock, MacKenzie, Murray, Monks, Porter, Parker, Regnier, Réclus, Roux, Senn, Stimson, Lewis Smith, Sands, Greig Smith, Teale, Tait, Toft, Treves, Vander Veer, With, Weir, Wyeth.

THE OPERATIVE TREATMENT OF APPENDICITIS.¹

By THOMAS S. K. MORTON, M.D.

MR. PRESIDENT, LADIES, AND GENTLEMEN: Since being requested by the directors, a few days since, to open the discussion of the Operative Treatment of Appendicitis, I have taken a glance through the literature of the subject in order to offer, as it were, a consensus of opinion regarding the present status of the subject, as well as to draw conclusions from such personal experience as has fallen to my lot in this direction. Now, I find myself embarrassed by the necessity of limiting my remarks to the few moments which are at my disposal, and to crowd into them even bare mention of the most salient facts. Hence, much must be entirely omitted, and other points given scant attention.

The discussion being limited to operative treatment, pathology and diagnosis—perhaps the most interesting branches of the subject, even to surgeons—are not to be touched upon except incidentally. But I cannot refrain, in passing, from saying that as

¹ Read at the Philadelphia County Medical Society, September 28, 1891. For discussion, see page 316.

the ratio of appendicular to cæcal inflammatory affections is probably 100 to 1, hence that *differential* diagnosis in diseases of this region, which is usually impossible prior to surgical interference, is neither necessary or important, as operative procedures up to the point of establishing diagnosis are identical for all affections of the cæcal region. Again, I would condemn without qualification needle explorations as an aid to diagnosis. The procedure is inherently dangerous, and will furnish no indication that cannot otherwise be obtained.

The number of cases of appendicular disease discovered when we are upon the outlook for them is astonishing. A large proportion of peritonitis cases in males, and especially in children, arise from this disorder; and in all cases presenting abdominal pain, whether acute, chronic, or recurring, no matter where referred, we should think of and examine for possible appendicitis. I have come to be very skeptical of such conditions as are described as abdominal "cramps," "colic," etc., particularly when of frequent recurrence. Curious as it may appear, yet it is a fact that the great majority of the profession are only now beginning to recognize cases of appendicitis and its consequences as such. Formerly the affection was almost universally diagnosed as anything else except itself. But just in proportion as the disease continues to be more certainly recognized, so surgeons are more early operating upon cases which demand interference, and, as a consequence, the mortality from the disease, as well as from the operation, is very rapidly on the decline.

Keen has said that "the first indication in appendicitis is to call a surgeon," that the physician, who almost invariably first sees the case, and the surgeon may together watch the case, and if operation becomes necessary, interference may be prompt and well timed; while the surgeon will have the great advantage of being already familiar with the case, and not disposed to delay the operation that he may acquire such familiarity. Again, Mynter has well said that "we are utterly unable to judge correctly from symptoms alone of the extent and severity of appendix lesions, and for this reason alone abdominal section is, and must be, the safest method of treatment" in many cases.

When Shall We Operate?—Judging from the cases that I have observed and from the writings of others, I would formulate as a good working rule: To operate not later than the third day of disease, if the patient, up to that time, has failed to markedly improve under rest, restricted diet, purgation, and topical applications. Especially should this rule be adhered to in cases where we have failed to move the bowels—these are apt to be the fatal ones. Further than this, we should invariably operate as soon as the presence of pus is assured; when peritonitis is developing or spreading; when signs of sudden rupture of an abscess into the peritoneal cavity appear, and where septicæmia from septic absorption is taking place. In children, operation must often be performed earlier than in adults, as with them the malady is more speedy in development, more fatal in tendency, and shows a greater proclivity to involve the general peritoneum.

But let me emphasize the point that *pain* is not a reliable symptom (especially when opiates have been administered) from which to judge as to whether the patient is better or worse; most weight should be given to the strength, temperature, and condition of the bowels, stomach, and general abdomen.

Mr. Treves urged that operation shall not be done until the fifth, sixth, or later day. But from my reading and experience I think this is too late. He argues thus because few deaths occur before the fourth or sixth day. These cases, however, really begin to die third, fourth or fifth day, although death may not actually take place before the sixth or later day, when the possibility of benefit from operation has passed. If the case is progressing well and operation is being postponed, it should be watched and observed frequently and most carefully. For we cannot predict at what moment an appendix abscess may perforate into the peritoneum, or other dangerous complication arise that will instantly demand operation.

If the case is operated upon early, the chances of recovery, as a rule, are exceedingly good. The mortality of appendicitis during the first forty-eight hours is almost *nil*, and the operative death-rate at that time is equally low. Later both rates increase, but the former much more rapidly than the latter. The patient, in this disease, is generally strong and well up to the moment of seizure, at which time the danger of operation *per se*, is at the minimum. Such mortality as results in operations for appendicitis has been mainly incident to undue delay. When physicians and surgeons generally have learned definitely to recognize such cases as are operative at a time before the vital forces have been too much sapped or dangerous complications have arisen, then will the mortality rate of both disease and operation remain steadily at a low figure.

Then, again, the local conditions from an operative standpoint are much less serious in the early stages. We have at first simply a swollen appendix with infiltration, and perhaps a few adhesions. We then do not have to deal with fetid abscess, foul surroundings, and sloughing tissues which may have given rise to intestinal gangrene, and other complications, as well as to the impossibility of securing primary union of the wound. Hernia is more common as a sequel in cases where the operation is performed late, and where the surroundings are gangrenous, and we can only secure healing by secondary intent.

The cry of every writer is for earlier operations. I have found no surgeon who regrets having operated early, but almost all mourn cases that were operated upon too late. No case appears where a mistake in diagnosis has been made, despite the awful array of affections which has been drawn up as liable to render uncertain the recognition of appendicitis. On the other hand, very many cases, opened with the expectation of finding other disorders, have proved to be appendicitis.

Who Shall Operate?—The operation for appendicitis may prove to be the most easy; but it is never trivial, often trying and sometimes even baffling the skill of the very best abdominal surgeons. Hence he who undertakes operation for the removal of the appendix for disease should be equal to dealing with any of the complications and emergencies of abdominal surgery. There is scarcely a complication which occurs in abdominal disease that may not be met with in operations upon the appendix. If a man knows only how to reach the appendix it is not enough, he must be able to cope with any accident or emergency that may arise. Therefore he must have had training in general abdominal surgery.

How Shall We Operate?—There are two classes of cases to be dealt with.

1. The acute, where there is perhaps abscess, perforation or general peritonitis.

2. Those where operation is undertaken in the interval between acute attacks as a prophylactic measure. The indications for the latter will be considered separately further on.

The preparations for the operation are usually of a hurried nature on account of the active nature of the disease, and the sudden determination that operation has become imperative. Previous purgation, if successful, will make the chances of recovery much more bright, no matter during what stage of the disease operation is performed. Cases where the bowels have been kept open from the outset of attack are always most favorable. Locally the abdomen should be cleansed as for any other operation.

All writers now agree that the incision should be lateral. Median incision is only permissible when diagnosis from other abdominal disease is not clearly made out, as where we have had suddenly developed, violent peritonitis arise without obvious cause. Even should the median incision have been made and the affection prove to be appendicitis, especially if septic, a lateral incision should still be resorted to, for it is exceedingly difficult and dangerous to drain septic appendicitis cases through a median incision, and often it is impossible to deal with complications, or with the appendix itself, except by the more direct route. I am of the opinion that almost any complication arising from appendix or cæcal disease can best be dealt with through the lateral incision. No writer has regretted making the lateral incision, although many have regretted entering through the *linea alba*.

This incision should be about three or four inches in length and terminate one inch and a half above Poupart's ligament. It should be carried down to its full extent through the right *linea semilunaris* until the peritoneum is reached, avoiding if possible the epigastric artery which normally would be situated to the inner side of the lower extremity of the wound. I have seen serious secondary hemorrhage from division of this artery. Having reached the peritoneum, if one does not at once get into an abscess cavity, we must exercise great caution not to open the gut by mistake. Sometimes adhesions will be found binding intestine to the peritoneum in the line of incision, and in these cases it is well to go at once to the lower or upper extremity of the wound, get into the general peritoneum cavity and work upward or downward, as the case may be, to the cæcum, when all adhesions can be separated by the finger or knife, and the peritoneum opened to the full extent of the external incision. Of course, the incision should be increased in size if there is any difficulty in getting into the peritoneal cavity, or subsequently if difficulty arises in any manipulation from lack of working room. But as a rule the smaller the incision the better, because of the less risk of subsequent hernia. The head of the colon is then sought out. If now it is found difficult to determine the site of the appendix, the longitudinal muscular bands of the colon may readily be followed down to their termination in the root of the appendix. Then, by careful manipulation one can usually trace the appendix, even through a mass of dense adhesions, and dissect it out. As a rule, in acute cases the organ will be found more or less free in the cavity of an abscess with its tip, perhaps, adherent to omentum or bowel. The appendix is to be dissected out with the finger, and often we do not see it until it is brought out of the wound ready to be ligated off. This manipulation closely corresponds to the modern one of removing the uterine appendages.

Now, what shall be done if the appendix is found to be bound down by a dense mass of adhesions, and if it would take a long dissection and endanger life from the time required to complete the operation? Under these circumstances I would advise that the appendix be left alone, rather than run any great risk of the patient's life to complete an ideal operation. We are often compelled to operate to save life, and that alone, even if we do run the risk (as of leaving the appendix) of recurrence. I do not regard the operation as complete in an case unless the appendix is removed, and we should never hesitate to dissect out or remove the organ simply for fear of opening up the general peritoneal cavity.

Cases of recurrence, with great violence of symptoms, are upon record where operation had been performed and the appendix not removed. Here, again, we have a parallel with the removal of the uterine appendages. Who considers that he has done a complete operation when he simply drains a pyosalpinx? yet there is a small (but constantly decreasing) proportion of these cases that must be so treated rather than endanger life by prolonging operation, shock, and anesthesia.

If the appendix can be excised, the question arises as to how we shall deal with it after separating all adhesions. In septic cases it will be found usually impossible to investigate the stump, after cutting away the appendix, into the cavity of the cæcum and approximate peritoneum the remaining opening. Where we operate between attacks the appendix, as a rule, can be dealt with in this manner and the investigated stump retained by a few Lembert sutures approximating the surfaces of the cæcum over the aperture. When, however, the organ and its surroundings are swollen and gangrenous the conditions are such that it is generally impossible to investigate the stump. It has seemed quite sufficient in these septic cases to ligate the appendix a quarter of an inch from its root with strong silk, and then cut off both the appendix and the ligature ends. But ligatures will neither become absorbed or encapsulated where septic conditions are present, and I have seen the threads coming out of the wound months afterward from a persisting sinus or by ulceration. So it occurred to me that we might resort to the old surgical procedure of leaving one end of the ligature hang out of the wound. That experiment I am now trying in a recent case. Chronic ligature sinuses assist in the production of hernia by interfering with solid union.

Frequently the appendix will be found with a meso-appendix. This should be ligated *en masse* or in sections, and cut away from the appendix. Then the appendix is ligated at its base and removed. Removal of the appendix is almost universally recommended, but Mr. Treves has simply straightened an appendix which he found angulated by adhesions and left it in the wound. Mr. Tait has practised in more than one case splitting open the appendix and inserting a fine drain tube into it. From these instances it will be seen that there exists in some minds an almost superstitious fear of removing the appendix. Certainly no sentiment can exist concerning the ablation of the appendix such as there is in regard to the ovaries and Fallopian tubes? Having the appendix once in hand, it does not add to the dangers of the operation in the least degree to remove it, while recurrence of the disease is thereby rendered impossible.

Occasionally the appendix is found to have sloughed off at its root, leaving a ragged opening into the cæ-

cum. In one or two cases the edges of the opening thus left have been inverted and closed successfully by Lembert sutures. In others the wound was left entirely open and packed with gauze; an intestinal fistula or artificial anus formed, but in time closed spontaneously. Yet another required a subsequent operation and Lembert sutures before it was cured.

Some surgeons recommend that in septic cases a little flap of peritoneum be sewed across the stump, or that it be tucked under a bit of omentum. I can see no advantage in this. It prolongs the operation and does no good, while by so doing we risk the formation of a secondary abscess pocket. Very many appendix stumps have been simply dropped into the wound again after ligation; fecal fistulæ did not form, and the wound closed satisfactorily.

Any portions of gangrenous omentum presenting in the wound should also be ligated beyond the junction with healthy tissues and cut off.

Any small openings into the peritoneal cavity may next be sewed up carefully, if the general peritoneum does not require drainage.

Then in regard to irrigation. If the general peritoneal cavity has been opened extensively, or if it is septic, it should be thoroughly washed out through the lateral incision. If it has not been involved the abscess cavity and wound alone should be irrigated. Under the latter circumstance we may employ a strong bichloride solution, but if the peritoneum is to be flushed nothing but water should be used.

If the general peritoneum has been septic or extensively opened or manipulated it is essential to use drain tubes to the base of the pelvis. The ordinary straight glass-tubes do not answer well, and rubber is not satisfactory. Here I have a collection of angulated and curved glass-tubes, most of which have been used with great satisfaction in appendix cases. The angle makes it possible to get the tube to fit well over the brim of the pelvis, yet not to project awkwardly from the lateral wound. By attaching a few inches of rubber tubing to the end of the ordinary cleansing syringe the bent tube can readily be cleaned.

The suturing of the wound is especially important if the case is *not* a septic one. Then the tissues should be sutured, layer by layer; this gives the best assurance of firm primary union and the avoidance of hernia. If, however, the wound is septic, and drainage or packing is employed, secondary union is inevitable. But I would still urge that the wound be as carefully sutured as possible in all cases, leaving ample room for exit of the drain-tube or packing. And I might say, in passing, that simple packing with strips of double cyanide or iodoform gauze will be found to answer all purposes of drainage in cases where the general peritoneum does not also require drainage.

Some surgeons advise using no stitches in septic cases, but simply packing of the entire wound with gauze. But by suturing we can usually secure primary union in a portion of even a foul wound, and temporary stitching has appeared to give a certain anchorage and support to the subjacent intestines, which, when the sutures are removed, is more or less retained. The stitches, of course, are to be removed, one or more at a time, when swelling, infiltration, tension, or deficient drainage become apparent. Strips of adhesive plaster should be employed to give the wound support and approximation during granulation.

Complications such as gangrene of intestine or mesentery, must be dealt with upon general principles of abdominal surgery. If intestinal obstruction

complicates the case, the site of obstruction should be ascertained, and the condition relieved, if possible, before closing the wound. Cases in which obstinate constipation has existed up to the time of operation, should be examined during its performance for possible obstruction.

Should peritonitis develop subsequent to operation, and not speedily yield to active purgation, the wound must be re-opened, and the abdominal cavity irrigated thoroughly and drained. Continued obstruction could probably be best dealt with through a new median incision rather than through the original wound.

As soon as the patient comes out of ether, if the bowels have not been well emptied before operation, it is my custom to at once begin the administration of $\frac{1}{8}$ grain doses each of calomel and podophyllin, at twenty minute intervals, until purgation is accomplished. This usually takes but a very few hours. Later salines may be employed if required.

Full strength peroxide of hydrogen solution has given me great satisfaction for cleansing and washing the wound-cavity when suppuration commences and sloughs are forming—it greatly facilitates the separation of the latter.

Persisting fecal fistulæ usually close spontaneously in time. Should they not, then re-opening of the parts several months later, and suturing of the cæcal or other opening with Lembert sutures is indicated, and has proved successful in several instances.

In conclusion, let me say a word in regard to operations undertaken in the interval between acute attacks, or, what may be termed, *prophylactic operative treatment*.

The indications for this measure are: Constantly recurring attacks (usually indicative of the presence of a foreign body in the appendix), which interfere with the individual gaining a livelihood, or render his life a constant burden, worry, and expense to him; also, where recurrent attacks have taken place in those, as seamen, hunters, explorers, etc., who are liable to be again attacked when they may be out of reach of adequate surgical aid. In this class of patients, operation during quiescence of the disease should be considered, and perhaps urged by the medical attendant. In most other cases, I do not think excision of the appendix should be often attempted in the quiescent period. We should rather counsel delay until the onset of the next acute seizure, when we can conscientiously urge the removal of the offending organ at once—that is, on the first or second day. This advice is given principally because of the great difficulties and dangers frequently encountered in operating during the intervals of attack when the adhesions are extremely dense. In fact, patients have died as a result of the long time required to complete the operation, because of the elaborate dissection required to free the appendix from its matrix of densely organized adhesions. In several instances the very best operators have been compelled to abandon these operations in the interval of attacks, not only without having been able to remove the appendix, but also without having been able to discover the organ in its bed of adhesions.

DURING a visit to the Strasburg exhibition Kocher's attention was attracted by the remarkably beautiful green color of some preserved beans. Subsequently he learned that during the boiling of these vegetables in a copper vessel an electric current was passed through, the copper of the vessel acting as an anode.

—*Am. Jour. Pharmacy.*

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Special Meeting, September 28, 1891.

THE PRESIDENT, JOHN B. ROBERTS, M.D., IN THE CHAIR.

DISCUSSION.

DR. WILLIAM PEPPER: I scarcely think that I need say much, for the subject as presented is largely one of operative technique, that the views of a purely medical clinician possibly are scarcely appropriate. Assuming that the subject under discussion includes all the acute inflammatory affections of the appendix, cæcum, and pericæcal tissues, much has been said to which I should take strong exception from the standpoint of a pure medical practitioner. I believe that if every case of appendicitis were operated on, the mortality would be tenfold what it now is. For more than a quarter of a century I have been in the habit of seeing a great many of cases of appendicitis every year. I base this statement partly upon the classical researches of Dr. Fitz, who has demonstrated more clearly than any other, that in a large proportion of cases of right iliac trouble the appendix shares in the trouble, if, indeed, it is not the starting-point of the trouble. Now, as a general rule, these cases recover under medical treatment and remain permanently well afterward, no surgeon being associated in the treatment of the case. In no year during the past two decades, have I failed to see a considerable number of cases of this kind, and the cases that have demanded operation, as contrasted with those which get perfectly well without operation, is probably at least as one to a score. I think that the assertion that as soon as appendicitis is suspected the surgeon should be called in, is quite out of accord with the experience of physicians the world over. As I have said, I think that the vast majority of cases, in first attacks at least, undergo resolution and terminate with some more or less permanent injury to the appendix, but without going on to the production of abscess, provided the treatment be instituted early and be kept up faithfully. In many of these cases there is early development of induration and fullness in the right iliac fossa, and in proportion as this appears early is it likely that the case will run a favorable course, or, if later, it develops signs of suppuration it will admit of treatment by the simple Willard-Parker extra-peritoneal incision. In proportion as the symptoms are violent, without localizing phenomena in the right iliac fossa, is there danger that rupture of an abscess has occurred, to be followed by the development of general peritonitis. I am entirely at one with the speakers who insist on early operation where this latter condition exists. I have had the operation performed as early as thirty six hours from the initial symptom, and have found suppurative peritonitis already present. I am sorry to say that in this case there was a fatal result, as will sometimes happen in the hands of the most skilful operator. I think that the experience of all will confirm the statement that the operation is a grave one. The operation of laparotomy for disease of the appendix, whether it is exploratory or radicle, is not a trifling operation, and I have rather extensive records to show that it is an operation attended with a great deal of danger, even in the hands of the most brilliant operator. I should protest against the view that, as soon as the diagno-

sis of appendicitis is made, an operation should be encouraged.

I believe that it is possible to note the time, in a certain large proportion of such cases, when the symptoms indicate the spread of inflammation, and then I think that the operation cannot be too promptly performed.

The question of diagnosis remains, in spite of all the good work that has been done, a most difficult question. The McBurney point I believe to be largely without value, uncertain in its location on account of the very varying relations of the appendix, apt to be mistaken for points of tenderness due to wholly different causes, and apt, possibly, to be mistaken for sympathetic tenderness of nerve points in the abdominal wall. I therefore believe that this sign, from which much was hoped, will prove to have very little positive diagnostic value.

The rectal examination has seemed to me to be of very material value; it is true not so early as we could wish, but in many operative cases I have found the roof of the pelvis altered as determined by a careful rectal exploration. I feel that I am wholly incapable of putting in words, nor do I know that this has been done, the exact differential diagnosis of the cases which demand early operation. While this is true, I would still urge the view that this does not justify the subjection of every patient with appendicitis to laparotomy. I trust that we shall learn to arrive at a more exact differential diagnosis. There is a combination of a certain history of the development of the case, which, taken in connection with the facies, the general symptoms, and the abdominal condition, as determined by external and by rectal examination will, in the hands of an experienced clinician, serve in the great majority of cases as a basis for this diagnosis. It is difficult to state this in terms as precise as we should state the terms of a diagnosis of encysted pleurisy, but I think that in those who have studied these cases will recognize a *tout ensemble* which admits of a diagnosis of those cases which should be subjected to early operation. I believe, on the other hand, that in the great majority of cases we are justified either by the mildness of the symptoms or the localizing tendency in the right iliac fossa in urging medical treatment, and this is further justified by the very frequent recovery of these cases.

Lastly, I shall say a word as to my entire opposition to operation in the majority of cases in the interval between recurring attacks. I think that medical records will show too many cases where thorough treatment, hygienic, dietetic, and medical has been followed by complete cure. I have had so many such cases in which cure has occurred after a number of recurrent attacks, that the adoption of a general rule that where a patient has had two, three, or more attacks he should be subjected to a grave operation like laparotomy, seems to be a dangerous postulate. I think it better to secure the consent of the patient to the performance of the operation, should alarming symptoms make their appearance in any attack, and then to persevere with carefully regulated medical treatment. There are cases unquestionably where the conditions of the patient, the fact that he may be attacked when out of reach of skilful surgical aid, make it necessary for the patient to decide between a change in his habits of life and an operation. These are exceptions, and it does not follow that a general rule that laparotomy should be performed in the interval between recurrent attacks of appendicitis should be laid down.

DR. KEEN: I wish to take exception to what Dr. Pepper has said in reference to not calling in a surgeon in a case of appendicitis until operation is needed. I think that it is of the most urgent importance that the surgeon be called in not to do an operation, but for consultation for his judgment rather than his knife—not necessarily to do a laparotomy immediately—but for the purpose of being ready to deal intelligently and promptly with the conditions when the time for operation arrives. He should not be called in, then, new to the case and unfamiliar with its features, and desiring, therefore, time to become familiar with it, unless the case is so serious that operation is evidently and instantly required. The surgeon should be with the physician the moment the diagnosis is made, not to do the operation then, but to be ready to do it the moment that it becomes necessary. I have seen cases lost, and have lost some myself, I am sure, from delay, from the natural unwillingness to plunge right in and do a laparotomy the moment we are called to see a case that really needs it, and yet from unfamiliarity is regarded as a doubtful case. We should have every point at our fingers' end, and be familiar with the fluctuations of the symptoms. Then our aid will be much more valuable than if we are called in only when the emergency for operation has arisen. A plain case every one can read and decide quickly. It is the doubtful cases that need carefully weighed decision—a snap judgment on a sudden call is more apt to be wrong than right.

MR. THOMAS BRYANT, of London: I assume that the term appendicitis as here used includes all those cases which have been spoken of as typhlitis, perityphlitis, and by other names, all of which have probably more or less connection with the appendix itself. Starting with that assumption, I at once proceed to the treatment of appendicitis. Here at the beginning, although a surgeon, I agree very strongly with the observations of Dr. Pepper. I am convinced that operative treatment is most valuable in appendicitis. I am equally convinced that delay in operating is the wisest course in the majority of cases. I should like to say in this place that it seems to me that the authors are a little mixed in regard to the classification of these cases. They have included cases that are acute from the beginning, with cases that are not acute, that have a slow and steady course. The cases that have a slow and steady progress, that begin with localized pain in the right iliac fossa, accompanied with tenderness and soreness, less swelling without any very acute symptoms, are cases which you must feel can be dealt with satisfactorily without the surgeon's knife; I do not say without the surgeon's aid, but without the surgeon's knife.

Dr. Morton spoke strongly of the use in these cases of calomel and podophyllin. Such statements rather startled me, and I should have been glad to have had some evidence of its value given. I should prefer to follow the line of treatment suggested by Dr. Pepper, and not give calomel and podophyllin in frequently repeated doses. I would rely more upon rest, belladonna externally and opium internally, and diet, believing that by such means, and knowing that by such means the bulk of the cases are permanently cured. In exceptional cases where these good results do not occur, and graver symptoms appear, the swelling increases and symptoms of peritonitis develop, the surgeon's aid becomes of immense value, and certainly where these symptoms do appear, and there is a steady progression toward the bad, it is unquestionably time for the surgeon to take a hand. In all

acute cases I have no doubt as to the right of the surgeon to interfere. I have seen cases where, within thirty-six hours after such acute symptoms, it was necessary for the surgeon to expose the part and let out the inflammatory fluids, if not remove the appendix itself. To my mind these two classes of cases which I have briefly described fairly indicate the line that the surgeon should take. Trusting very much to expectant treatment in the least acute cases, and surgically interfering early in the acute.

In reply to the question in regard to the propriety of operating, whether or not the surgeon is justified in operating between the attacks, my judgment would decide in the negative. In the majority of cases there is no second attack. If there is a second attack it can be treated on the same lines as the first, only there is a tendency toward interference if the symptoms do not settle down rather rapidly. I say this because I am sure that I have seen many instances where things have settled down after a second attack without any further trouble. Because we have met with cases that after the second, third, fourth, or it may be the eighteenth attack, have at last come to the surgeon's knife, I think that we should not accept that as a decided evidence in favor of surgical interference. In fact, we must be governed by each case by itself, and we should surgically interfere only when we find small chances of nature terminating the case guided by medical skill.

Then we come to the operation. I am not sure that I am quite in accord with the authors of the papers. It is quite true that in doubtful cases of appendicitis—that is, cases in which you do not expect to find a great deal of pus or inflammatory fluid—the incision in the right semilunar line will probably be the best. In this way you come down readily on the cæcum, and you are more apt to find the appendix. The majority of cases with which the surgeon has to deal are not quite in the stage to which I have referred. There is generally much more diffused swelling about the cæcum, and that swelling gravitates backward and upward, sometimes toward the loin. I can recall a good many cases that I have opened where I was certain the swelling was about the cæcum, where it was backward toward the lumbar region. I can recall several instances in which my attention was drawn more to the lumbar region than to any other part, and it was only by going into the history that I concluded that the trouble was located in the cæcum. The lateral incision is a good one in these cases; but it must be more lateral than the semilunar line. I have made my incision well back, corresponding to the line of the anterior superior spinous process, and tending backward toward the loin. In this way you get well at the cæcum, and your finger can be readily passed into the iliac fossa. You can examine the part; you can drain the part well and generally by the open treatment, not being too careful to stitch the wound, a good result takes place. I would say that in a large number of cases—my friends may say neglected cases—that an incision more posterior than the semilunar line would be the better one. The incision in the semilunar line should be reserved for cases that have not advanced to such an extent as I have just indicated. If there were time, I could give the Society many cases as illustrations of the truth of what I have said.

Another point to which I should like to allude is the question whether or not these are all really cases of appendicitis. In at least three instances of cases which had presented a history of a cæcal trouble, but in which death had resulted from some other cause,

I have found cicatrices in the posterior part of the cæcum some distance from the appendix. In two cases that I have treated the evidence pointed to the cæcum as the seat of trouble. In one, a boy, aged twelve years, I incised an abscess, and eventually a large orange-seed escaped. I have no reason to believe that that could have come from the appendix. In the second case a piece of bone that had been swallowed had evidently passed through the wall of the cæcum and caused suppuration. These two cases presented all the features of typical appendicitis. They were dealt with in the way that I have stated and both recovered. We must, I think, bear in mind that these cases are not all due to disease of the appendix, and that many of these may have no connection with it.

This brings me to another point, and that is whether or not, under all circumstances, it is expedient to search very carefully for the appendix.

In these severe cases should we disturb the parts so much as is often absolutely necessary? We have had to-night good evidence of the difficulty of finding the appendix in some cases. I have always felt that in these cases we should do more harm than good if we searched too far for the appendix. I am satisfied with well irrigating the part and treating it by the open method.

Dr. Morton has mentioned hernia as following the operation. I have never seen this. That may be because the bulk of my incisions have been made posteriorly. I have done many of these operations, and have seen many others done by my friends, but I have never seen hernia as a result.

DR. J. M. BALDY: It has always seemed to me that it was not so much a question of the diagnosis of appendicitis as the differentiation between the operative and the non-operative cases. The diagnosis of appendicitis *per se* is extremely easy; at least, so I have found it. As far as symptoms are concerned, I know of only one that is of constant value, and that is, constant, deep-seated pain in the right iliac fossa, with induration. I think in such a case there is little question but that there is inflammation in or about the head of the cæcum, and, presumably in the majority of cases, in the appendix.

Mr. Bryant has spoken of cases where large foreign bodies have been discharged through an abscess, and claims they have come from the cæcum. He offers no evidence of this except the size of the body. I have seen the appendix sloughed off, leaving a sufficient opening in the cæcum to admit the index-finger, so that I cannot see that the size of the body indicates in any way that it came from the cæcum, and not from the appendix.

I have been glad, and, at the same time, rather surprised to hear the McBurney point condemned. I believed that it is utterly worthless as a reliable point in the diagnosis. It is one of those attempts at refinement in diagnosis which are apt to lead only too many astray. I have tried to apply McBurney's point, but have failed in every case.

The rectal examination may be of value in many cases, but we have all seen cases, and Dr. Keen's is one in point, in which there is a small abscess high up, which could by no possibility be recognized by rectal examination. If the abscess contains many ounces of pus, it will generally extend downward toward the pelvis, and may be felt through the rectum. There are, however, so many cases in which this can not be done that we can place no definite value on this method except in a limited number of cases.

I cannot help thinking that purgation is of distinct value when I see the great relief afforded to a man groaning with the most intense pain simply from having a movement of the bowels. It may not be curative, but in every case, whether abscess is present or not, it gives great relief. I believe that purgation should always be used. At the same time if the patient was suffering, I should not hesitate to use opium until the purgation had acted, or after it had acted in case of necessity. The amount required is not great, and it will not interfere with the purgation. Those cases in which it is difficult or impossible to induce purgation, are going to do badly.

I know of no other intra-abdominal disease in which it requires more skill and practical experience to differentiate between those cases that should be let alone surgically and those which should be operated on. I grant that the majority of cases of appendicitis get well without any operation. Again, there are certain cases that do badly from the beginning, and in which operation is clearly indicated. But, with certainty, there remains that large class of border-line cases in which it is next to impossible to say whether pus is present or not. If there *is* pus, no one should hesitate. The operation for abscess is simple and easy. The abscess once opened, I do not think that in these acute cases any time should be lost in searching for the appendix. In trying to find the appendix, and even when found, in trying to remove it, the general peritoneal cavity will often be opened, and life will be lost, where otherwise it would have been saved. Only one case, as far as I am aware, has been reported in which the abscess has been opened and the appendix left, where a second operation was required for a severe recurrent attack.

I believe, with Dr. Keen, that the surgeon should be associated with the case from the beginning, although not necessarily to operate. When a physician is called in to operate, the tendency, if there is doubt—and doubt only too often exists—is to postpone the operation. If the surgeon has seen the case from the beginning, and studied the symptoms, and knows the details, when the time comes he will have made up his mind whether or not to operate. If, however, the surgeon loses another twelve or twenty-four hours in hesitation, in addition to what the physician has already lost, the patient may be irretrievably lost. The deaths after operation are due not so much to operation as to delay.

It is impossible to lay down any rule as to the time at which operation should be performed in any case, or in any class of cases. In some the onset is so sudden and violent that it is impossible to come to any decision as to the seat of disease. This was the case in the patient reported by Dr. Keen, and in another instance I know of in New Jersey. In the latter case, it was not until a few hours before death that the symptoms were sufficiently marked to cause any alarm. This is often the history of cases in which the operation is postponed. The patient will be doing well until within a few hours of death, when the end comes suddenly, and the patient sinks rapidly.

DR. FRANK WOODBURY: Although as a physician I look at this subject from the medical standpoint, I am in favor of operating. To save time, I may say that I heartily coincide in the statements just made by Dr. Pepper. I also endorse the remarks of Mr. Bryant, in which he anticipated what I had intended to say—that is, that each case must be studied by itself. I think that the surgeon and physician look

at these cases a little differently. The surgeon is looking for general rules to govern him in the treatment of cases, while the medical man is more in the habit of individualizing his patients. Concerning the propriety of operation and the results to be anticipated therefrom, we all acknowledge that there is in some individuals a tolerance to operative interference and to suppuration that does not exist in others. Some will survive dangerous gunshot wounds; others will perish from a slight injury. There are probably points in any given cases of appendicitis which come before us. Physicians, who are accustomed to go into the history of the patient and to investigate the antecedents of the case, know that individuals who belong to families with a high physical standard and who lead regular lives, are able to stand severe illnesses and operations, coming through them speedily and well; while others, having poor family history, bear very little surgical interference, and easily succumb to disease.

The question of the time of operation and propriety of operation really resolves itself into the query, At what time does a case of appendicitis become a surgical case? I would here raise my voice against the physician yielding to the temptation to put a hypodermic needle into an iliac abscess or swelling in order to make the diagnosis. As soon as he does that, he takes surgical responsibilities on his shoulders, and in no case are they likely to be more serious than in appendicitis. The physician should have sufficient surgical knowledge to determine when the time for operation has arrived, or, acknowledging his inability to decide this, he should secure the best obtainable surgical advice, not necessarily to operate, however, but to determine the propriety and proper time for operation, if found necessary.

Among the cases that come to my mind, three stand forth prominently. One was the first case which I saw, some eighteen years ago. A man in the lower walks of life, continued at his work as a machinist, making no complaint, until one day he fell on the floor of the shop in a collapse, and was brought to the Pennsylvania Hospital. He had a feeble pulse, and a Hippocratic face; the surface was cold, and, as he was dying, no attempt was made at diagnosis. He died in a few hours, and the post-mortem showed it to be a case of perforative appendicitis, with perforation and the usual foreign body. Here there was a question of operation. The patient did not seek medical advice, and there was no time for operation.

The last case I saw in my own practice occurred last spring, in a patient whom I had attended at intervals for a number of years. I had attended him a year before with a light attack of appendicitis, and warned him that if he had a subsequent attack he should consider the question of operation. He did have a subsequent attack while away from the city, and on his return was attended by another physician for three months. The man improved and was about, but always felt a weight and pain in the right iliac fossa. He was then taken with acute obstruction of the bowels with intense pain, and finally I was sent for. In this case nothing that was given him produced a movement of the bowels. I may say that in this case Dr. Thomas G. Morton operated on the second day after I saw him; but the patient died

five days later without a movement of the bowels. The bowels were probably matted together and gangrenous.

The third case that occurs to me is one operated on also by Dr. Thomas G. Morton five years ago, which I have reported to the College of Physicians' and to this Society. I believe that Dr. Morton claims that this was the first case in this country where the correct diagnosis was made prior to operation of amputation of the appendix, and where the patient recovered. The patient has been well since the operation, although prior to it he had had a number of attacks. The patient is present to-night, and I should be pleased to show him to the Society. He is still wearing a light truss to protect a weak place in the abdominal wall at the lower portion of the incision. [The patient was exhibited.]

DR. H. A. HARE: I rise for information rather than to discuss the surgical aspect of the papers which we have heard. Like Mr. Bryant, I am at a loss to know why calomel and podophyllin, the latter in such large amounts as one eighth of a grain every twenty minutes, should be given after an operation for appendicitis. Podophyllin is the slowest acting purge in the Pharmacopœia, taking eight or twelve hours to product an effect, as a rule; not only this, but these drugs act on the small bowel, high up, while the appendix is in the large bowel, low down. If saline purgatives were ordered it seems to be a better treatment, for we have evidences of their great value. Even these are not without danger. I do not believe that a man can take one-eighth grain of resin of podophyllin every twenty minutes until he is purged without producing much intestinal griping and pain. Anstie pointed out the fact that podophyllin was a distinct irritant, particularly to the small intestine.

DR. DE FOREST WILLARD: Mr. Bryant has said that he has not seen hernia follow this operation. A boy came into my office to-day on whom I operated two years ago. He did perfectly well for a year, when on attempting to lift a heavy body the bowel protruded through the center of the cicatrix. He had worn a bandage and a truss; but I put on a heavier truss, which relieved him for a time. He returned in four months; the pressure of the truss had produced a large slough, and he came near having a perforation of the bowel. The ulcer finally healed. He now has at the outer angle of the wound a second small hernia, and at the inner angle there is a slight tendency to protrusion. The wound was a large one. The boy was in extremis at the time of operation, and there was an enormous accumulation of pus.

In regard to deep-seated pain and induration in the iliac fossa as a diagnostic sign, I have seen cases in whom there was not a particle of local pain or of induration.

The boy already mentioned had no such symptoms. He had been kicked at the umbilicus, and the pain was chiefly at that point, yet the abscess was in the iliac region. The appendix was open, and a small mass of feces had escaped. There was an enormous accumulation of pus extending down into the pelvis on one side. The appendix was removed, and the opening stitched.

DR. M. F. KIRKBRIDE: In the past year and a half I have had four cases, but shall speak only of one. I shall first refer to the history of the case as given in a letter to the previous attendant. The physician

¹ Case reported in Proceedings of the College of Physicians of Philadelphia, vol. vii.

was called on Thursday, April 3. The patient had been constipated for one day. It was at first thought that the case was one of typhoid fever, as the father had recently recovered from this disease. Calomel was given, but no action secured. Citrate of magnesia was given with the same result. The pain and tenderness in the right iliac region increased. There was some tympanities. Injections of soap and water with a few drops of turpentine were practised with no result. Salts in one drachm doses were then given without effect. Vomiting began. It became apparent that it was a case of appendicitis, with obstruction of the bowels. Injections given on Saturday morning were not retained. On Saturday a surgeon was called in consultation. Operation was decided on; but as the surroundings were not suitable the family was advised to have the patient admitted to a hospital. This they agreed to do; but at 3 P.M. decided not to do so. The physician in charge then declined to have anything more to do with the case.

I was called to see the patient on Sunday evening, at ten o'clock. The temperature was 99.5°; the respiration 36. No pulse at the wrist. The heart beats 130. He vomited everything, and for several days had had stercoraceous vomiting. I gave hypodermics of morphine and atropine, and afterwards hypodermics of strychnine. After he had reacted somewhat I put him in the knee-chest posture, and gave an enema of sulphate of magnesia, turpentine, glycerine, and warm water, and gave whiskey and turpentine by the mouth. I also gave for several hours sulphate of magnesia in 1 drachm doses. The first two doses were rejected, but afterward there was no vomiting whatever. In three hours I had the tumor removed and the boy sleeping comfortably, and after that he got along nicely. On the sixth day after I was called a slough passed from the bowel. This was three inches in diameter. The case then went through that of a regular case of typhoid fever, as far as the temperature was concerned, and even showed the eruption. The diagnosis of appendicitis was made by two physicians and an eminent young surgeon.

DR. JOSEPH HOFFMAN: McBurney's point has been condemned, but the reasons have not been given. The position of the appendix varies. You cannot lay your finger on any special point and say that there the appendix should be found. We must remember that the appendix revolves in three planes, and that, therefore, it may have three systems of revolution. We cannot expect to find the appendix in the same position. This anatomical point forever blots out McBurney's point.

In reference to purgation, I had a case of which I shall recite the points in which the use of calomel and opium comes out beautifully, so far as the apparent curative effects are concerned. Dr. Wheeler was treating a case of appendicitis with opium for some days without benefit. He then called me in and I brought Dr. Price. He was then purged with calomel after the opium treatment, and the pain entirely disappeared. Shortly afterward he went to Baltimore and had a recurrent attack, from which he died. This shows what purgation will do.

DR. M. PRICE: We are certainly slightly mixed in the discussion of this question. The physicians are talking about appendicitis without perforation, and the surgeons of appendicitis with perforation, conditions entirely opposite. Drs. Pepper and Meigs say they never saw but one single case of perforative appendicitis get well, and they reported that case themselves. It is true that this statement was reported

fifteen years ago, but that does not make the disease any the milder.

There is one other point. It is absolute folly to operate for appendicitis and expect good results, unless you can purge the patient. If you succeed, and after the operation persist in the use of purgatives, every case, so far as I know, will recover.

If at the operation there is found a barrier separating the abscess from the general peritoneal cavity, thorough irrigation of the abscess cavity is required. If this barrier cannot be demonstrated, thorough irrigation of the whole peritoneal cavity should be insisted upon. In a case operated on five weeks ago, there was well-marked thickening and induration in the right iliac fossa. I removed five or six ounces of pus, and when I came to irrigate, although I used every precaution, I found the small intestine slipping by my finger. I washed the abdominal cavity out thoroughly, and passed in a straight glass draining-tube, held in position by one stitch at the lower angle of the wound, and then packed with gauze down to the knuckle of intestine. The appendix was eaten off by an ulcer, and so gangrenous that I was afraid to touch it. The man was purged every day for a week, and made an uninterrupted recovery. I may mention that I have never seen a case of appendicitis with perforation and general peritoneal inflammation without a subnormal temperature.

DR. MORTON: There are many symptoms that have not been mentioned. Bladder irritation is a prominent symptom in some cases from inflammation or pressure on the ureter, or of the bladder wall. This brings out one of the dangers in operating on the appendix. Mr. Treves has predicted that some day a portion of the ureter will be taken out in mistake for the appendix or torn out with it.

It is also to be remembered that in perityphlitis the superficial veins are more engorged on the right side of the body than on the left.

Perhaps my views in regard to the time of operation have been misunderstood. What I desired to say was that no case that is not improving should be permitted to go beyond the third day without surgical interference. I do not mean to say that all cases should be left so long. In some the operation will be required in the first few hours; in others on the first day, and in still others on the second day. The great majority of cases will recover from the present attack at least, upon purgation, topical applications, and regulation of diet.

Another danger of allowing septic processes to go on in the neighborhood of the appendix is the development of phlebitis in the branches of the mesenteric vein causing troubles in the liver. Pain in the liver is often a sign of appendix disease. It has been held that many cases of abscess of the liver have originated in septic processes around the appendix infecting the veins. I saw Dr. Steinbach operate on a case in which the patient before operation showed a tinge of jaundice. The appendix ran upward nearly to the liver and was surrounded by a large abscess. Intense jaundice supervened after the operation, and the man died apparently from acute inflammatory degeneration of the liver. I believe that the liver trouble was a septic complication from the appendix.

In regard to the use of calomel and podophyllin, I would say that I know very little about experimental therapeutics, but after giving the various purgatives a thorough trial I have found that minute doses of calomel and podophyllin frequently repeated give the best results in these cases. They move the bowels thoroughly and with rapidity. In the case reported

from fifteen to twenty movements were secured in eight or ten hours. These small doses cannot be vomited as readily as a drachm of salts can be, nor do they produce emesis even shortly after etherization, when salines would not be tolerated by the stomach. After the bowels have been thus started and the stomach quieted as a consequence, salts will be retained, if indicated, and work with greater promptitude and efficiency.

DR. PRICE: I rejoice that in America we have adopted some of Mr. Bryant's surgical wisdom in regard to appendicitis, as well as in regard to hernia. "If you find a man hanging cut him down."

I will allude to three cases in which there were recurring attacks. In one, the man had had twelve to fourteen attacks. I saw him in the last in collapse on the eighth, tenth, or perhaps the twelfth day. In this case the argument offered by the family physician was the common one, that as the patient had recovered from so many attacks he would also recover from this. This is a dangerous argument and often a fatal one. I said that this man would be dead in three hours; he died in an hour and a half. In a recent case I saw the patient on Monday. Dr. Agnew saw him on the same day, and we both urged section. The physician and family decided to wait. On the following Friday Dr. Agnew was asked to operate and refused. Many of us are now taking high ground and refusing to operate at the eleventh hour. It is not fair to surgery to operate on dying patients. Dr. Agnew has recently operated in the twenty-fifth attack, removing a huge appendix, and the boy recovered. Deaths from appendicitis are very numerous; indeed, more so than a year ago. They were then called typhoid fever, but now our methods of diagnosis are more accurate.

Mr. Tait's recommendation of drainage has been referred to. That would be as bad surgery as to drain a huge pus-tube. The cheesy, disorganized appendage remains. No one would cut down on a sequestrum in bone disease and simply put in a drainage-tube.

I have the records of two cases of appendicitis, in one of which the opening was through the lungs, and the other through the cesophagus. Dr. Hunter McGuire has reported a case in which the appendix was found floating in a puddle of pus. You will all remember the illustration in the *British Medical Journal*, or the *Lancet* of a year ago, of a case of hepatic abscess with a large opening through the loin. You could see the liver, the kidney, and the colon. The man lived twelve days and died of dysentery. I never see a case of neglected appendicitis without thinking of this case of neglected abscess of the liver. In most cases that we see the small intestines are enormously distended and the pelvis is filled with adherent knuckles of bowels. In these you often have obstruction. In many cases the use of a purgative is simply folly before the adherent knuckles of intestine have been released by operation.

I scarcely favor the long ligature method. In these cases I have inverted the stumps, and the transfixation has been made with the finest needles. If the appendix sloughs it goes inside.

The McBurney point is wholly ununiform and worthless.

RAKE and Buckmaster claim to have succeeded in cultivating the bacillus of leprosy in the serum from a blister. The work was performed in the Government laboratory at Simla, India.

—*Pharm. Jour. of Australasia.*

The Polyclinic.

PHILADELPHIA HOSPITAL.

IN speaking of the relative merits of solutions of bichloride of mercury and of creoline, in washing out the uterus, Dr. Hamill says he prefers the bichloride, as it does not discolor the return flow, as does creoline, so that you scarcely know what you are getting.

Very frequently, in cases of abortion, a curette is scarcely as good as placental forceps. Often, I have used a curette with as much force and as thoroughly as I dared, but finding that the discharge has kept up, of an offensive and putrid nature, I have afterward used placental forceps, going around the fundus, and have taken away large masses.—*Hamill.*

In threatened abortion, the most important thing is rest in bed, with any treatment which will quiet the uterine muscle. Opium, or opium and chloral, or opium and viburnum, by suppository, may be used.

Often, however, the physician is not notified until too late to prevent abortion. When the abortion is inevitable, we find the os patulous and somewhat dilated, the membranes frequently protruding, and at times very excessive hemorrhage. If called to see such a case before abortion has taken place, our best means is to tampon the vagina with antiseptic wool or cotton, leaving it there for a period of eight hours, and, upon removal of it, frequently you will be gratified to find that the product of conception is blocking up the os, and in a short time the abortion will be at an end. As to the after-treatment, the only thing is to be sure we are rid of the rotten membranes.

—*Hamill.*

The progress of the different steps of syphilis during pregnancy is not so rapid as in the non-gravid condition.—*Hamill.*

When a child is born of a woman who has contracted syphilis during pregnancy, the question comes up as to how it shall receive nourishment; how shall it be fed? If the child be perfectly healthy, I think it is infinitely better and wiser to feed the child artificially, and not run any chance of its becoming infected from the mother's milk. If, however, the child is already infected, and has the undoubted manifestations of syphilis, there seems no reason why the mother should not nourish the child.—*Hamill.*

BRIGHT'S DISEASE.

The changes in the circulation in Bright's disease are common to all forms of inflammation of the kidney, and particularly to the chronic forms of exudative and productive inflammations. In these forms, marked changes take place in the circulation; indeed, they are so marked and clear that Mahomed, a few years ago, taught that the one essential symptom of Bright's disease, in all its manifestations, was a symptom due to a change in the blood-vessels—that is, high arterial tension. In a large number of cases in which there were no changes in the urine, he found that there was high arterial tension. He further showed, in cases of scarlatina, that he could predict scarlatinal nephritis by this symptom, before any changes appeared in the urine. Of course, this change in tension is only shown by the sphygmograph.

This high arterial tension is due, practically, to a spasm of the blood-vessels, and much discussion has arisen as to the cause. Some believe it to be due

simply to retained products in the blood, which, irritating the vaso motor nerves, cause obstinate spasm or tonic contraction of the vessels. On the other hand, another group of writers, just as active, and with very forcible arguments, showed it not only to be due to spasm, but that it was associated with actual organic change in the blood-vessels, and so came forth the volumes of Gull and Sutton. They believed that Bright's disease was only a local manifestation of what was a general process; not only an inflammation of the kidney, but an endarteritis, with proliferation of connective tissue around the vessels; hence the development of thickened arteries whose caliber was more or less reduced, which would cause high tension. Sir George Johnson places these symptoms as secondary to the disease in the kidneys; prolonged spasm causes hypertrophy of the muscular coat, and the spasm, on account of inviting increased nutrition, caused chronic inflammation of low grade. It has not been clearly proved that we have a general arterial process associated with Bright's disease, but we do have high arterial tension, and we do have *some* changes, and *some* arterial symptoms. In the first place, with high arterial tension we necessarily have an influence on the central organ of the circulation; so we have hypertrophy of the heart. There is, as a clinical sign, accentuation of the aortic second sound. So there are associated arterial and cardiac symptoms. In scarlatinal nephritis, we will have, very early, an accentuation of the aortic second sound.

As this hypertrophy increases and high arterial tension exists, further changes occur. In addition, we have eventually changes in the arteries, a chronic inflammation, and all the symptoms that go with an endarteritis; so that in the course of Bright's disease, particularly of the chronic form, there are, first, simple functional changes; second, chronic inflammatory changes in the vessels, and, hence, all the phenomena and symptoms of atheroma and endarteritis. It is well to think of the relation between these vascular changes and the kidney disease.

It is well to bear these changes in mind, as frequently death takes place, not from the kidney lesion, but from secondary changes, such as apoplexy or development of aneurism. As a result of the atheroma, the coronary arteries are affected, and there are changes in the heart.

In cases of Bright's disease which are characterized by remissions in all the symptoms (they get better and go about, but take cold and come in again with a fresh attack), there is congestion and inflammation upon an old lesion. You might say there is congestion of a diseased kidney.

The relation of bowel trouble to Bright's disease is a very serious one, and important to recognize. It is serious, because often you are attempting to treat it in such a way as is entirely antagonistic to the renal process which is going on. These patients are subject, or seem to be liable, to attacks of diarrhoea and indigestion. From the slightest indiscretion, the patients are likely to have diarrhoea. You are at first tempted to give an opiate, but opium is a dangerous drug, as it lessens the amount of urine, and, even after an ordinary dose, the patient may suddenly develop uræmia.

It is not practicable in all cases of diarrhoea to examine the urine; but where it occurs in those past fifty years of age, be very careful as to the form of medication you employ. Use the smallest amount of an opiate, if it is necessary at all, and use other drugs if you can do without an opiate. That is an important therapeutic hint which may save you from going to the coroner.

In this disease a low grade of catarrh of the intestines is very common to chronic dysentery, due to organic disease of the intestines, takes place, and you have discharges, and blood, and mucus, and all the other symptoms. Be careful not to treat with opiates, and look for albuminuria, for the onset of these cases often causes a uræmia rapidly developed. An so in Bright's disease it is quite important to bear in mind that an attack of uræmia may be induced by a severe attack of diarrhoea. Sometimes I doubt whether the diarrhoea is an expression of uræmia, or whether it is simply a predisposition, a process which predisposes to uræmia. Thus one of my patients, who had chronic exudative inflammation of the kidneys, following an attack of inflammation of the kidneys in the course of scarlatina ten years ago, was this summer apparently better than he had ever been. He was seized with a severe attack of diarrhoea, which continued forty-eight hours. The second night of the attack he complained of pain above the eye; he could not recognize the people in the room. Rapidly he became absolutely blind, and went on to stupor, coma, and death. Such symptoms will often occur, and the point to remember in attending these cases of chronic nephritis, is that you must be alive to the simplest attack of diarrhoea that may occur.

One other practical point: Usually it is not the Bright's disease itself that is so dangerous; but the acute pneumonia, the little pleurisy, or the slight gastritis, which a healthy person would throw off, is a death blow to one with Bright's disease.—*Musser*.

The glands above Poupart's ligament are the immoral glands. If you find them enlarged, examine the penis, and in nine-tenths of the cases you will find the cause in the penis. If the swelling is in the glands below Poupart's ligament, the cause is probably in the foot.

In syphilitics a heavy chill and high fever, followed by sweating, will be followed by marked secondary symptoms.

Secondary symptoms beginning with a papular or tuberculous eruption show a very severe attack.

Syphilitic eruptions are polymorphous; that is, many forms of eruption are present at the same time—the roseolous, erythematous, papular, etc. This is not the case in non-syphilitic eruptions; a point of diagnostic importance.

The reason the hair is lost in syphilis is, that there is a proliferation of connective tissue cells, which press on the hair bulbs, and cut off the blood supply, and cause the hair to die. As soon as the patient is put on treatment, and these cells are absorbed, the hair again grows if the bulbs have not been destroyed.

It is by means of the skin that the poison of syphilis is eliminated, as we see by the eruptions.—*Horwitz*.

COOPER HOSPITAL NOTES.

FUNCTIONAL DISTURBANCE OF THE BLADDER.

AMONG the causes that excite the bladder to increased and painful activity, malarial poisoning is by no means uncommon. In cases of this character, especially in the remitting form, the periodical and abrupt appearance of frequent and painful micturition and vesical tenesmus during the course of the afternoon, leave no doubt as to the nature of the cause. This disturbance occurs more frequently in women than in men, and, on account of its transient character and the absence of local inflammatory changes, the poison is believed to operate through the nerves that govern the function of the bladder.

—*Godfrey*.

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THE SNOOK-HERR POISONING CASE.

WE have before us two pamphlets upon this case; one, defending the theory of arsenical poisoning; the other, that of ptomaine poisoning from decomposing animal food.

Dr. Irwin has made out a pretty strong case for the arsenic theory. His study of the symptoms brings his explanation within the bounds of possibility, and the testimony of his chemist would render it probable, if the evidence stopped at that point. Still, the verdict of a conscientious jury, were a man on trial for his life, in this case, should be the Scotch one, of "not proven." The difficulty is that the investigation stops short of being conclusive. Dr. Irwin's cases presented symptoms that could be explained by arsenic, though they hardly presented a typical picture of poisoning by this agent. But the cases reported by others, instead of approximating more closely to the usual type, did not approach it nearly as much as did Dr. Irwin's. Then the chemist's tests were not what would be accepted as conclusive in a court of law. If arsenic had been employed so lavishly as to imperil the lives of seventy people, actually killing six, the drug should assuredly have been easily detected, and that in quantity sufficient to leave no reasonable doubt as to its presence. But one chemist seems to have detected arsenic, and that in very minute quantity, and by but one test, that of Reinsch; well-known to be so delicate as to indicate the smallest possible amount of the poison. In fact, it is doubtful if Reinsch's test would be received as conclusive evidence that a toxic dose of arsenic had been administered. To establish his case, Mr. Flexner should have confirmed this test by all others in use, and as there must have been a large supply of material procurable, this should not have been neglected. All that can now be said as to this is that in two cases out of seventy, one chemist claimed to have detected arsenic in exceedingly small amounts by the most delicate of tests, but failed to verify this by

means within his reach, or to apply the arsenical tests to the food. Various explanations could be given as to the presence of this trace of arsenic, and between its detection and the conclusion that all these seventy cases of sudden sickness were due to arsenical poisoning there is a very large *non sequitur*. The weakness of Dr. Irwin's cause lies not in his presentation of the clinical aspect of the case, which is masterly, but in his reliance on this chemist's evidence as conclusive, which it is not.

On the other hand, we find in Dr. Goodman's paper that a very complete investigation of the food, and of material from other patients, failed to show any trace of arsenic, even by Reinsch's test, or by any other of the numerous tests applied. The post-mortem appearances did not correspond to those of fatal arsenical poisoning, and the tests applied to the stomach and intestines failed to show the presence of arsenic. The microscopical and chemical examination of the salad revealed the presence of decomposition and the resulting ptomaines, capable of producing the symptoms described; an extract from this salad proved fatal to a fowl in whose body the extract had been injected; and, finally, the history of the preparation of the chicken, cooked and allowed to stand two days in August before being used, all offers a full and satisfactory explanation of all the phenomena in this case, excepting two. These are the trace of arsenic discovered by Flexner, and the fact that two of those who suffered claimed that they had not eaten the salad.

But then, neither of these is sufficient to overthrow the positive evidence adduced by Dr. Goodman. The percentage of human forgetfulness is large enough to account for the second exception. They may have eaten the salad and forgotten it, or it may have been mixed on the plates with the other food and eaten without their knowledge, or their illness may have been due to some other cause, such as fear, or over-eating, ice-water, etc. The trace of arsenic may have been due to that drug having been taken medicinally before the accident, for in these days of universal self-medication the Lord only knows what a man may be taking, or it may have been due to one of those odd laboratory accidents that sometimes occur.

Viewing the case in the light of the evidence as placed before us, Dr. Goodman has much the best of the argument; in fact, he has come as near to a mathematical demonstration as such a case will allow.

Annotations.

PARNELL'S death was peculiarly well-timed; it was about the only possible solution of the problem. The great Irish leader was half American, and from the old navy stock; the characteristics of which were well shown in his bull-dog determination not to accept defeat. It reminds one of Perry's action at the battle of Lake Erie; Paul Jones' desperate fight in the Bon Homme Richard, and the old Cumberland going down with her colors still flying defiantly. Let the dead leader's faults be buried with him, and remember only his great services to Ireland, and the pluck that never failed.

AUSTRALIANS vindicate their truly English origin by getting into the most nonsensical predicaments imaginable, in regard to legal enactments. It seems that if a lawfully registered pharmacist desires to leave New South Wales and remove to Queensland, he cannot carry on his business in the latter colony, unless he first serves a new three years' apprenticeship; no matter how long he may have practised pharmacy. A bill designed to remove this restriction, so that a chemist legally registered in other colonies may register in Queensland, has just been rejected. In America it would not be possible to secure obedience to a law as ridiculous on its face. Still, there may be good reasons why Queensland should hold the New South Wales registration to be utterly valueless.

WE published Professor Dixon's last contribution without comment, knowing that its contents would excite comment enough. Dr. Dixon has confirmed his claims to the discovery of the "lymph." He has gone beyond Koch, and has fairly demonstrated the true chemical composition of the active principle. And in doing so he has administered the *coup de grace* to the sensational remedy. It seems singular that no one else has arrived at this solution. The history of the lymph, since the publication of Dixon's first paper, pointed to the need of a study of the organic bases in their physiological and possibly therapeutical properties. Something of this was in the mind of the writer who penned an editorial for this journal last August, on the Animal Products as Remedies; although not aware that the idea suggesting itself to him dimly at that time was already in process of elucidation at the hands of Dixon and Zuill. The second report from the work of these gentlemen is presented in this issue, and we hope to give our readers the results of subsequent investigations, as they assume shape for publication.

DR. JOSEPH PRICE has been requested to resign from the College of Physicians, of Philadelphia, the charges of slander brought by Drs. Penrose, Baldy, Baer and others having been pronounced to be well-founded. It will be remembered that when this report was made the censors investigated it and pronounced against Dr. Price. It was then found that by the laws of the college this action was equivalent to expelling Dr. Price. This was thought to be too severe a penalty by the members, and action on the report was deferred, whereupon the censors threatened to resign. By the action now taken, Dr. Price is forced out of the College. The whole affair grew out of a quarrel in the staff of the Gynceean Hospital; and no one who has noted the acerbity of the discussions carried on by the younger gynecologists of this city will be surprised to see that their bickering has gone beyond proper limits. The judicial and dispassionate temperament appears to be wholly incompatible with the gynecology of these days. Specialism in this department has been carried to that extreme that no one gynecologist is capable of seeing any good in the individuals who differ with him. When even the atmosphere of the College of Physicians failed to reduce the exuberant spirits of youth to the truly Philadelphian somnolence, it was easy to see that somebody was going to get himself disliked.

Two fishermen of Van Diemen's Land captured a wounded whale, in whose body they found 200 pounds of ambergris, valued at \$50,000.

Book Notices.

MEDICAL AND SURGICAL ELECTRICITY. By GEO. M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. Eighth edition. Pp. 788. 200 illustrations. New York: Wm. Wood & Co. 1891.

The present volume is essentially a new work, as compared with its predecessors, for much of it has been rewritten and revised, so as to bring the science of electro-therapeutics fully up to date. The work was the first scientific one published in America, and nearly the first anywhere, and its high position is fully maintained. The book is elegantly gotten up in its mechanical department, and is by all odds the best work on the subject of which it treats.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. A yearly report of the progress of the general sanitary sciences throughout the world. Edited by CHARLES E. SAJOUS, M. D., and 70 associate editors; assisted by over 200 corresponding editors, collaborators and correspondents. Illustrated with chromo-lithographs, engravings and maps. Five volumes. 1891. F. A. Davis, Publisher.

These volumes contain a large number of extracts from the current medical literature. That they form a fairly complete digest of this material, or contain the best of it, is not, we believe, claimed; at least it can hardly be claimed in verity. But what is embraced in this publication is of sufficient value to entitle the Annual to a place in the library of the studious physician. The lithographers, Messrs. Burk and McFetridge, deserve a special word of commendation for the superb manner in which their work has been accomplished. The chapter upon "Paratoloid" has a flavor of antiquity about it, especially in view of the latest investigations made by Professor Dixon. But that is nothing compared to the resurrection of George B. Wood's treatment of typhoid fever by turpentine; very good, indeed, but rather out of place in a work designed to chronicle the "progress" of the medical art.

THE MOTHER'S HAND-BOOK. A practical treatise on the management of children in health and disease. With an appendix, containing articles on diseases and accidents that may suddenly happen to grown persons. By LEVIN J. WOOLLEN, M.D. Richmond, Virginia: Everett Waddey Company, Publishers and Printers. 1891. Cloth. 8vo. Pp. 419.

The book is written for the laity, not the profession. From the examination we have been able to give it, the impression we received is quite favorable. The author shows excellent judgment in deciding where to stop in his directions to the mother, and when to call in the physician. The advice is plain, practical, and couched in such terms as any woman of ordinary intelligence could comprehend. The directions sound a little old-fashioned, and the contents of the family medicine chest have a "befo' de wah" appearance; but both are doubtless well-fitted for the persons for whom the book is intended—dwellers in secluded places, who have not the resources of the modern pharmacy at hand. To them, this book must be of immense value; giving so many excellent hints as to the best manner of dealing with the ailments and injuries that are most apt to occur, where the doctor is too busy and too remote to be summoned except in grave emergencies.

We must not omit a parting word of commendation for the mechanical execution of the work; especially as it does not come from any of the great publishing houses. The paper is excellent, the typography remarkably free from fault. The binding should have been more substantial than cloth for such a work.

THREE THOUSAND QUESTIONS ON MEDICAL SUBJECTS. Arranged for self-examination. With the proper references to standard works in which the correct replies will be found. Philadelphia: P. Blakiston, Son & Co. 1891.

The references are to the quiz compends. And this book is consequently open to all the objections brought against that pernicious class of publications. The idea is good, provided the references were to the standard text-books.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA. Twenty-fourth Annual Session, June 10-12, 1891. The volume contains nine reports and papers, besides the usual statement of proceedings.

THE PHARMACOLOGY OF THE NEWER MATERIA MEDICA. Part XIII. Treating of Mistletoe, Musk-root, Mutisia Viscifolia, Newbouldia Lævis, Ox-eye Daisy, Orthosiphon Stamineus, Muirapuama, Paracoto bark, Pengawar Djambi, Paraguay tea, Pichi, Pulsatilla and Quebracho. Published by Geo. S. Davis, Detroit.

DIAGNOSIS AND TREATMENT OF HEMORRHOIDS AND OTHER NON-MALIGNANT RECTAL DISEASES. By W. P. AGNEW, M.D. Second edition. San Francisco, Cal. 1891. Cloth, 12 mo. Pp. 148. Price, \$1.50.

This book is a defence of the injection method of treating hemorrhoids; and as such we would recommend it to every physician who is at all interested in the subject. The author makes out the best case we have yet seen, for this method. We note a great improvement in the general make-up of this edition over the first; and also the evidences of additional experience and study.

PRACTICAL INTESTINAL SURGERY. By F. B. ROBINSON, B.S., M.D. Volume II. Pp. 206. 1891. Geo. S. Davis, Detroit. Cloth, 50 cents; paper, 25 cents.

ESSENTIALS OF PHYSIOLOGY. By H. A. HARE, B.S., M.D. Third edition, thoroughly revised and enlarged. Philadelphia: W. B. Saunders. 1891. Cloth. Pp. 192. 12mo. Price, \$1.00.

The principal addition to this edition appears to be in the chapter on the cranial nerves, where nine plates from Arnold's "Icones Nervorum Capitis" have been introduced. If students must have quiz-compend, there are no better than this extant; but were we ever again to enter the teaching arena, we would do our level best to drive this pestiferous class of books out of the students' hands. We would much rather take a candidate who had never read a line in any text-book, than one who had studied only the quiz-compend.

LEÇONS CLINIQUES SUR LES MALADIES MENTALES. Le Délire Chronique. A Évolution Systématique. Par. V. MAGNAN. Paris: Aux Bureaux du Progrès Médical. 1891. 8vo. Paper. Pp. 377.

This forms the fourth part of this valuable clinical work upon mental disease. The first and second chapters treat of the historical part of the subject; the third, of illusions, or delirious interpretations, and auditory hallucinations, the period of persecutions. Chapter IV takes up the troubles of the general sensibility, and speaks of the variety of visual hallucinations. Chapter V gives the modes of reaction, and treats of sequestration. Chapter VI describes the ambitious period—that of dementia. The seventh to the eleventh chapters relate to the diagnosis, the delusions of persecution, and the systematized delirium of degeneration. In the last chapter, medico-legal considerations are taken up, and finally two and a half pages are devoted to the treatment.

The Medical Digest.

ECZEMA.—J. W. Corbett (*Med. World*) states that in a case of "tetter" of ten years' standing he obtained a cure by applying fuming nitric acid.

TONSILLITIS.—A. S. Hudson (*Med. World*) says that for nineteen years he has in no case failed to abort an acute tonsillitis. He gave in one case at bedtime 1 grain sulphate morphine and 10 drops Norwood's tincture veratrum viride. In another case he gave $\frac{1}{2}$ grain morphine and 5 drops veratrum every hour until relieved.

RHUS AROMATICA FOR INCONTINENCE.—Krauss (*Buffalo Med. and Surg. Journal*) thus sums up a paper on this subject: Incontinentia urinæ, due to slight disorders of the genito-urinary or the nervous system, is amenable to the rhus treatment, that gives most favorable results. Incontinence due to destructive lesions of the spinal cord, complicating the vesical center or its reflex arc, is not amenable to the rhus treatment, and gives negative results.

If there be any cause of irritation within reach, it is removed. He then gives the rhus in doses of 5 to 10 drops of the fluid extract, increased to 20 drops, four times daily. He prescribes it in glycerine.

In anemic cases he combines rhus with iron:

R.—Ext. rhois aromat fl3v.

Syr. ferri iodidi,

Elixir calisayæ.....āā q. s. ad 3ij.

M.—S. 3ss four times a day.

The prescription is incompatible pharmaceutically, as the iron and cinchona precipitate; but it does not follow that it is therapeutically incompatible; and the tannate of iron probably forms a useful ingredient.

MANAGEMENT OF THE PLACENTA.—If there be danger to the child in forcing an early expulsion of the placenta, the danger to the mother is equally as great, and probably greater. The practice is almost certain to cause a retention of portions of the secundines, which worry and fret the uterus, causing prolonged *post-partem* pains, frequently *post-partem* hemorrhage, and various other dangerous puerperal accidents, such as metritis, peritonitis, septicæmia, etc.

The conclusion of the whole matter is, that unless there be some positive indications for interference, such as *post-partem* hemorrhage, the physician should wait until spontaneous retraction of the uterus has expelled the placenta into the vagina before making attempts to deliver it. It may then be extracted without fear of injurious consequences.

When physicians generally learn this valuable lesson, *post-partem* complications, tardy puerperal convalescence, and cases of chronic invalidism, resulting from mismanagement of the third stage of labor, will be much rarer than at the present time.

—F. C. Ferguson, *Indiana Med. Jour.*

DIPHThERIA.—Bacteriological research has not so far proved to be of such value in diphtheria as in tuberculosis, the bacillus of the latter being now stained and seen in five minutes by any practitioner who cares to take the trouble, and in suspected incipient phthisis no one should neglect the microscope as a means of diagnosis. Cases of arrest, if not cure, of the tuberculous process in the lungs, are not at all rare under proper treatment, even after yellow elastic fibers and bacilli had been found in the sputum.

Still, such conclusions as those of Dr. Welch are valuable, if not as yet for purposes of diagnosis, certainly as furnishing indications for treatment. Firstly, being a poisonous focus, local germicidal treatment is urgently called for, best of all, perhaps, hydrogen peroxide, the 18 or the 15 per cent. solution in spray, as being very little irritant to the patient, and an effective bactericide. And, secondly, since a constitutional poison is circulating in the blood, it should be destroyed. As antidotes for this purpose do not yet exist, the next best course is supporting treatment, by which the vitality may be spun out till the poisonous process has exhausted itself, the culture having run its course. A scientific basis for treatment is thus established.—*Canada Lancet*.

MORBUS OCCULTUS OSSIUM.—In 1870, Miss S. N., aged fifty years, called at my office, complaining of severe pain of the index finger of left hand. The finger was not enlarged, indurated, or changed from normal temperature.

In a few days thereafter, she visited me again, bringing with her a small piece of bone. She stated that she felt it break loose from the remaining bone, and that soon after one end protruded through the skin, and she drew it out. She showed me the wound, freshly made, by its exit.

Within a short time, she returned to consult me further. She brought with her another and larger piece of apparently freshly expelled and healthy looking bone; showing the fresh injury to the flesh and skin through which it had passed, nearly or exactly at the same point through which the first had passed. This, she stated, like the first, had, within a short time after fracture, spontaneously made its exit through the flesh. I particularly noticed these bones; they were devoid of periosteum, but appeared to be sections of sound bone.

This disease has continuously existed from that date to the present time, being now twenty-one years.

Having requested the patient to take care of all the bones thus exfoliated and expelled, I am now enabled to place before you 500 pieces or sections of bones, thus separated and spontaneously expelled during a period of twenty-one years.

These sections comprise nearly all, if not all, the digital, metacarpal, and carpal bones; also the bones of the radius, ulna, scapula, and sections of the left side of the inferior maxillary bone. The whole of the hand-bones have been thrown out, section by section. All of both radii and ulnæ in sections of various sizes and shapes have been spontaneously thrown out and replaced with incredible speed by new ossific material, which has again, by the same process, been again expelled, and again replaced, as the bones, now presented, will attest.

Of the pieces before you, there will be noticed fourteen entire sections of the fore-arm bones, averaging two and a half inches in length—some diagonal, others transverse. Eight of these sections have portions of articulating surfaces—either with carpal bones or with the humerus. Fifty other pieces—sections of radius and ulna—average over four and a half inches in length; some of them comprised of one-half of the circumference of the bone, and others one-third, one-fourth, etc.

In these bones, thus discharged, is found, in sections, the whole of the spinous process of the scapula, with many broad sections of its dorsum.

In these 500 sections of apparently healthy bones, at date of their exit, are seen six pieces from the inner posterior angle of the left inferior maxillary bone.

These measure over one inch in length and one-fourth wide. These are of very recent expulsion.

An average in length of these 500 pieces will exceed one inch, and their thickness never less than the entire outer layer of bone from which they are thrown.

These bones break without apparent cause. They are all devoid of periosteum and cartilaginous appendages. They come forth clean of all surroundings, as do the bones from boiled meats. A short time prior to the break or fracture of the bone, the patient feels more or less pain in the location, and of longer or shorter duration. Some bones break within a very short time; others, after much longer time, from manifestation of pain in the parts. The patient states that she always distinctly feels the break of each section of bone; says that, in most instances, she is also able to hear the break with distinctness. This is followed, in almost all instances, with lancinating pain, which, in due time, partially subsides, but in most instances, the pain is more or less severe and continuous, until the fractured or separated fragment or section is expelled. This is always naturally or spontaneously accomplished, and at widely differing periods of time. In some instances, a section of the radius or ulna, two or three inches long, one-half or three-fourths of an inch wide, as high up as the center of the shaft, a distance of five or six inches from the wrist, will be spontaneously expelled, within less than one hour, from the back of the hand. At another time, the space of one or two weeks is required to expel it. In no instance, is there any induration, inflammation, swelling, increased heat, redness, or suppuration forerunning, accompanying, or following this singular and often multiplied phenomenon.

While all the bones of the hand and fore-arm are here exhibited, showing their articulating extremities perfect, at no time has the articulation of any joints been hindered. No enlargement or atrophy, no deformity or perceptible decrepitude, has resulted. Every joint is perfect in the flexion and extension of the limb; in the pronation and supination.

It will be noticed that all these bones are broken with a clear vitreous fracture, and, generally, have sharp, cutting edges. The bones are not abnormally brittle, but the opposite; many of them, after lying dry for ten or twenty years, are found to be strong, and, some of them, elastic. The bones of secondary formation are thicker in their bony structure, and diminished in their canaliculi. They are also less white, bordering, in color, on a light saffron, and hence easily distinguished from the original.

This patient is living in this county, seventy-one years old; and, excepting this singular osseous disease, is in average good health. An examination of her hand and arm will show no appreciable defect. The arm has not shortened; all the articulations are perfect. The arm and hand are greatly scarred from fragment exits of bones, which are generally thrown out on the back of the hand, though many from other localities. Nearly all the fore-arm bones have passed down the outer portion of the arm, to the back of the hand, and made their exits there.

In most instances, a section of loose bone, as high up as the middle of the fore-arm, has been propelled, by some vicarious muscular action, down the arm and forced through teguments on the back of the hand, and ejected entirely without any aid whatever. So singular is this vicarious muscular action, and so unerring and effectual, that it is reasonable to infer that each, of all the vast number of ejected bones, would have been complete, if not aided, as in some instances,

by the fingers of the other hand of the patient, after the end had protruded through the skin. In no instance has any other aid been either given or required.

In every instance, even after the protrusion of entire ends of the radius and ulna, over two inches in length, the wound heals by first intention. From all the wounds thus produced, I will be within the facts by stating that not a teaspoonful of pus has been formed. On no occasion has there been but a few drops, and those only from the large wounds, made by the expulsion of entire sections, transversely broken off, of the radius or ulna. Not one drop has ever been formed at a depth greater than the subcutaneous tissue.

At one time the flesh will appear altogether intolerant of these fractured particles of bone, and throw them off with incredible speed; at another time, a loose piece of bone two inches or more in length, and one-half or three-fourths inch wide, will quietly remain under the skin for weeks, producing no swelling or inflammation; and, all of a sudden, the parts pain, and the piece is spontaneously moved and ejected. At no time have the joints of this affected limb failed to articulate.

It is, to my mind, plain that all these ejected bones were necrosed or dead before their separation. The fact that they were all devoid of periosteum and appendages; that their exit produces no shortening of the limb or other deformity, evinces the fact that within the separated periosteum ossific deposit has occurred to a sufficient extent to hold the flesh in its normal situation, to maintain muscular traction, and to permit articulation of joints.

Whether or not this new ossific deposit surrounds the entire shaft of the bone, so as to require it to break through it, or not, cannot be told; but it is a fact that at the expulsion of a large, transverse section of ulna or radius, no appreciable loss of bone is observed, either by the patient or others.

—B. F. Bell, *Va. Med. Monthly*.

GERMAN NOTES.

HERMAN D. MARCUS, M.D.

GLEET.—The prognosis in urethritis posterior is a great deal better than in urethritis anterior. Nitrate of silver washes (1-4,000 to 1-5,000), with a soft catheter or applications (drop by drop) of $\frac{1}{4}$ per cent. to 2 per cent. solutions with Guyon's syringe, will generally be found sufficient in post. urethritis. In the anterior form, the lesion should be exactly localized with the endoscope. In diffused cases, injections in or washing out of the urethra with astringents is advisable, while in the circumscribed form direct applications of nitrate of silver solutions must be used. In deep-seated infiltration sounds are recommended; but care must be taken to introduce them not further than the lesion, to prevent cystitis, epididymitis, or prostatitis. If gonococci are present, it is well to refrain from using any instrumental therapie.—E. Kromayer, in *Berl. Klin. Wochensh.*

Medical News and Miscellany.

DR. A. E. ROUSSEL has removed to 2112 Pine street, Philadelphia.

MALIGNANT diphtheria has broken out at Statonsville, Delaware.

DR. HENRY W. STELWAGON has removed to 223 South Seventeenth street.

DR. JAMES C. WILSON has been elected to succeed Da Costa at Jefferson Medical College.

Drunkenness increases in Germany. The Teutonic intellect has been developed beyond its capacity.

SIR MORELL MACKENZIE asks \$10,000 damages from the Soden Company for an unauthorized use of his name.

A DAKOTA woman has entered suit against her doctor for inducing her husband into the morphine habit.

OLIVE-STONES gave rise to fecal impaction, in a case described by Rodrigo Perez de Yarto, in the *Medical Bulletin*.

THE professional partnership hitherto existing between Drs. L. A. Duhring and H. W. Stelwagon has been mutually terminated.

AMONG other presents received by Professor Virchow on his birthday, was a beautiful silver column, surmounted by a figure of Liberty.

THE effort to provide a ward for contagious diseases in Chicago has failed, the public service committee being unwilling to spend \$34,000 upon it.

AN adder coiled around the neck of a drunken man one day, and scared him into life-long teetotalism. Will some one kindly inform Mr. Keeley?

PROFESSOR JOHN J. REESE has resigned the chair he has so long filled in the University of Pennsylvania. His successor has not yet been appointed.

PROF. HOBART A. HARE's opening lecture at Jefferson was very well received by the students. Dr. Hare gives promise of proving a good lecturer.

Now here's something like! A Georgia man has produced rain by simply hanging up a rattlesnake skin. Cheaper than gun-powder, and quite as effective.

DR. JOHN A. LAROS, of Coopersburg, Pa., lost a valuable horse from rabies. Hundreds of animals in Lehigh county are said to have been bitten by rabid animals.

The *Canada Lancet* attributes the possession of "hen sense" to the *New England Medical Monthly*. We tender our sympathies to Wile, and cheerfully offer to hold his coat.

NEVER before has the medical profession of the Eastern belt been so profoundly stirred. Dr. Mapother has announced that a diet of oatmeal and brown bread promotes the growth of the hair.

THE Southern Surgical and Gynecological Association meets in Richmond, Va., November 10, 11, and 12, 1891. Members of the medical profession are cordially invited to attend. Thirty-one papers are down on their programme.

A DANISH sailor is masquerading in California as "Professor Arnold," of Berlin, and engaging himself to numerous susceptible Californiennes. We trust our old friend, Professor A. B. Arnold, may not be put to any annoyance thereby.

WILLIAM C. STROUD, of the Baldwin Locomotive Works, left \$200,000 to found the Eliza Cathcart Home for Incurables, as a memorial to his mother. The institution is to be governed by the Presbyterian Hospital.

THE eighth annual meeting of the New York State Medical Association will be held Wednesday, Thursday, and Friday, October 28, 29, and 30, 1891, at the Mott Memorial Hall, 64 Madison avenue, near Twenty-seventh street, New York City. Sixty papers appear on the programme.

DR. BRANDT SUES THE "HERALD."—County Commissioner Dr. J. R. Brandt recently took the first step in a libel suit against the *Herald*. He demands \$50,000 damages for the editorial printed in the defendant newspaper, last Monday, which reflected on his integrity as a public official.—*Chicago News*.

THE successive invasions of migratory peoples leave the wrecks of the earlier races along the outskirts of the continents. So, from the farthest corners of the Pacific coast there comes a reminder of a long forgotten therapeutic sensation, in a paper published in the *Pacific Medical Journal* on the Pneumatic Cabinet. Jequirity! Where art thou? Cúndurango! Arise! What, ho! Bergeon!

REV. HENRY LOSCH has published what he terms an "Improved and Complete Manual for the Systematic and Practical Study of the German Language." Mr. Losch is a teacher of German, and the book is the outcome of his own experience as to the needs of the student. The price of the book is \$1.50, and it can be obtained from Mr. Losch, at 4109 Pine street, or from J. J. McVey's bookstore, 39 North Thirteenth street, Philadelphia.

DR. BAKER, of the Michigan State Board of Health, has had an analysis made of an "extract," with which a company proposes to make artificial milk. The substance is found to consist of sugar, glucose and salt, with a little salicylic acid. A teaspoonful of this is to be dissolved in half a pint of milk and an equal quantity of water added. It is a great pity that we cannot treat the adulterator of milk as Napoleon did the rascals who supplied inferior food to his soldiers—hang a few as an example.

At the Home for Female Consumptives the report states that during the year ending March 31, 1891, 56 patients were received and treated, and at the House of Mercy 44 cases were admitted.

At the Northeast Sick Diet Kitchen during the year the aggregate number of regular and occasional meals given was 13,562. At the Southeast Sick Diet Kitchen 700 persons received aid and 10,400 meals have been furnished to the sick.

The Northwest Sick Diet Kitchen furnished 6,999 meals, and the Southwest Sick Diet Kitchen furnished 9,258 meals.

Or late seldom a week passes without a medical man putting an end to his existence. This week it is reported that two doctors have committed suicide. One, Dr. Walter, Medical Officer of Health at Marshfield, near Chippenham, shot himself with a revolver on Monday last. It is said that he has been suffering from fits of depression recently. Dr. Walter was, I believe, a few years ago, Assistant Demonstrator of Anatomy at Charing Cross Hospital. He leaves a widow and two children. The other case is that of Dr. Bate, of Bermondsey, who was observed by a policeman on Tuesday evening to stagger and fall in the street. He was taken to Guy's Hospital in an insensible condition, where he died on Wednesday morning. In his pocket was found a bottle of prussic acid and a love letter addressed to "My Darling Lassie."—*Hosp. Gazette*.

WEEKLY Report of Interments in Philadelphia, from October 3 to October 10, 1891 :

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess.....	1	1		Fever, puerperal.....	1		
Alcoholism.....	1			" scarlet.....			6
Apoplexy.....	1			Fever, typhoid.....	5		
Asthma.....	1			Hemorrhage.....			10
Anæmia.....	2	1		Hernia.....	3		8
Bright's disease.....	9			Inanition.....	1		16
Burns and scalds.....	1	2		Inflammation brain.....	1		8
Cancer.....	18	1		" bronchi.....	1		
Casualties.....	5	3		" kidneys.....	1		
Cerebro-spinal meningitis.....	1			" larynx.....			2
Congestion of the brain.....	3	4		" lungs.....	4		8
" " lungs.....	1	1		" peritoneum.....	4		6
" " liver.....	1			" s. & bowels.....	9		1
Cholera infantum.....		15		" tonsils.....			
Cirrhosis of the liver.....	1			Intussusception.....	1		
Consumption of the lungs.....	58	4		Jaundice.....	1		
" " bowels.....				Marasmus.....			19
Convulsions.....	1	11		Neuralgia of the heart.....	1		
" " puerperal.....				Obstruction of the bowels.....	1		
Croup.....	4			Old age.....	14		
Cyanosis.....	3			Paralysis.....	5		2
Debility.....	1	3		Poisoning.....			1
Diabetes.....	2			Pyæmia.....			1
Diarrhœa.....	1			Scrofula.....	1		3
Diphtheria.....	1	17		Septicæmia.....	1		2
Disease of the liver.....	1			Sore mouth.....			1
" " heart.....	23	3		Softening of the brain.....	2		
" " spine.....		1		Suffocation.....	1		
Drowned.....	1			Suicide.....	2		1
Dropsy.....	2			Teething.....			1
Eczema.....	1			Tumor.....	2		
Erysipelas.....	1			Uræmia.....	2		
Enlargement of the heart.....	3	1		Wound, knife.....			1
Fatty degeneration of the heart.....	4			Total.....	211	161	

GEORGE KEIL has in preparation a new edition of his Medical and Dental Register-Directory and Intel-ligencer of Pennsylvania, New Jersey and Delaware; the volume to contain about two hundred and fifty pages, bound in cloth. We have made arrangements with Mr. Keil by which we are enabled to present a copy of this useful work of reference to each new sub-scriber to THE TIMES AND REGISTER, who shall re-mit three dollars for his subscription between this date and the first of December.

THE MEDICAL PRESS Co. (limited),
1725 Arch street, Philadelphia.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending October 10, 1891.

DICKSON, S. H., Surgeon. Ordered to Marine Barracks, Washington, D. C.
MAGRUDER, A. F., Surgeon. Detached from Marine Bar-racks, Washington, D. C.
FEREBEE, N. MCP., Surgeon. Ordered to the U. S. S. "Atlanta."
DRENNAN, M. C., Surgeon. Detached from the U. S. S. "Atlanta."
TRYON, J. R., Surgeon. Ordered to the U. S. S. "Chicago."
WALTON, J. C., Medical Inspector. Detached from the U. S. S. "Chicago," and granted six months' leave.
KEENEY, J. F., Passed Assistant-Surgeon. From the U. S. S. "Minnesota," and to the Naval Hospital, New York.
CRANDALL, R. P., Passed Assistant-Surgeon. From the Naval Hospital, New York, and to the Naval Laboratory.
BOYD, ROBERT, Assistant-Surgeon. From the Marine Ren-dezvous, Boston, and to the U. S. S. "Chicago."
ALFRED, A. R., Assistant-Surgeon. From the U. S. S. "Fern," and to the U. S. S. "Kearsarge."
GATES, M. F., Assistant-Surgeon. From the U. S. S. "Kearsarge," and to the U. S. S. "Fern."
AMES, HOWARD E., Surgeon. Ordered as delegate to the Public Health Association, Kansas City, Mo., October 20, 1891.

RESIGNATION ACCEPTED.

NORTH, JAMES H., Assistant-Surgeon. Resignation ac-cepted September 8, 1891.

The Times and Register.

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Whole No. 685.

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CALIFORNIA AS A WINTER RESORT FOR INVALIDS.

By A. C. W. BEECHER, M.D.,
PHILADELPHIA, PA.

THE season is approaching when the physician is asked where certain of his patients shall go to avoid the inclemency of a Northern climate, or, the physician himself is constrained to recommend, advise, and even urge the departure of his patient, often without serious consideration of the convenience, comfort, or the expense.

Few questions are more important to decide, or require more discrimination, than that of advising patients to go away and the indication of where they should go. This is particularly applicable in the case of the sufferer with confirmed pulmonary disease, notably phthisis.

I believe few physicians (comparatively speaking) are personally familiar with the localities or regions to which they send their patients. There is, perhaps, a reasonable excuse for this condition—lack of means, time, or disposition, or all of these, and so are dependent upon the reports of others for whatever of information they may have of them.

It is the fate of the physicians—and particularly those in large cities—to receive from time to time circulars, pamphlets, and books upon various places, lauding their advantages as health resorts, giving barometric, thermometric, and hygrometric tables, which are generally meaningless, so far as anything can be derived for practical use.

I believe that nothing but a personal visit can give the desired knowledge. Not of a day only, but sufficient to observe the climate and surroundings, and preferably during the season which it is most desirable for the patient to avoid at home.

The many places recommended for invalids of the same class are apparently so diametrically opposite in what would naturally be regarded as desirable, as to appear incongruous; the extreme cold of the Dakota winter being regarded as health-procuring as the more moderate temperature of Southern California, and is, perhaps, in some respects, more advantageous. For the patient, sick with whatever disease, who is able to travel, stop a longer or shorter time at a place, and then move on at will, a trip is perhaps better than a prolonged sojourn in one locality; but the patient who is far advanced in an incurable disease should never be sent away from home; and I hold that a physician is censurable, if not more, who would advise the contrary, unless the patient's family decide to make a home in a recommended locality. For in that way, and only in that way, will the invalid have home comforts; and it is the deprivation of these comforts that shortens the life.

A personal friend, who had spent some winters in the Bermudas, once wrote to me, saying: "In the name of humanity, keep your consumptives at home!" This expression was made from observations of invalids who had, by recommendation, sought the climate of those islands, "who, either in their rooms or in the damp and chilling corridors of the hotel, shivered and coughed their lives away, suffering greatly ere death relieved them."

It is not sufficient to recommend or regard a place as suitable for invalids because the temperature does not reach the extremes of heat or cold as they are found in the Eastern and Northern parts of our country, nor that tropical plants grow and the trees are ever green. It is a noted fact that cold winds of the Southwest are more penetrating and unbearable than to be found in the North, even in the most inclement period of a Northern winter, and that because the houses are not built to resist, and no provisions for heating the rooms.

Southern California! Oh, how delusive! The land of perpetual sunshine, flowers, orange groves, vines, Elysian fields; no storms, no sweeping, chilling winds, no need for stoves or furnaces.

The poor invalid, filled full of hope, leaves home to seek this great natural sanitarium, a journey of perhaps 4,000 miles, arrives weary and exhausted, but with brightened eyes looking out upon the luxuriant green grass, orange blossoms, and fruit on acres upon acres of trees, feels thrilled with the idea that here there is no snow and ice, here the warm and genial temperature will enable the eye to feed on beauty, the lungs to breathe a softened atmosphere; but woe to the unfortunate who is not provided with good, warm clothing, for the temperature (because it does not reach the extremes, because the tropical plants remain out during the entire year) does not admit of indulgences in summer garments.

Sleeping may be done at most any time under comfortables and blankets. The houses or hotels are not generally heated, nor is there any general provision made for the heating of apartments to combat an emergent cold snap or the chilly evenings which are frequent; it becomes a case of "go to bed to keep warm."

In the last of May, 1890, in the city of Los Angeles, Cal., I saw ladies wearing fur shoulder capes, and I personally experienced the comfort of my winter clothes, which I had not discarded, excepting a light overcoat instead of my heavy one. A beautiful, charming, and attractive place, palm-trees and century plants planted in the ground along the curbs in some parts, towering and luxuriant eucalyptus, orange orchards and evergreens at almost every hand, and flowers everywhere, pleasing to the eye, making a picture hardly to be seen elsewhere in the United States. Smaller adjacent places are said to be even more beautiful, and the temperature delightful to those who are merely run down from close application to business, or those who are completely convalescent from prolonged sickness; but to the invalid afflicted with incurable disease or organic disease of the lungs, I can readily understand he will be worsed instead of bettered, and is fortunate if he have strength enough to get home to die among his friends.

In a conversation with a lady long a resident of Los Angeles, and whose position brought her somewhat into relation with the traveling public, I expressed my surprise that this place had such a great reputation as a winter resort for invalids from the North and East, when she stated that the inhabitants regarded Los Angeles as a summer resort rather than as a winter resort; in other words, that summer was the proper season to visit this place. She also gave me some of her observations of some of the cases which come for health—borne from the cars on a litter; borne to the cars in a coffin. Hopeless from the first; hopeful to the last; chilled, dying, dead; away from home and the comforts only to be gotten there; among strangers who are mercenary even though humane. The region of perpetual fruits, flowers, and evergreen trees mean to the invalid, no ice, no snow, no shiver from cold and chilling winds, sweet and balmy atmosphere, gentle repose—often a complete delusion. Warm, woolen clothing always advisable, and outside wraps should be at hand.

I would earnestly recommend to the members of the medical profession, as far as possible to familiarize themselves with the health resorts; their advantages and disadvantages; their fitness or unfitness for particular classes of cases; and, under the most favor-

able considerations, to weight well the advisability of sending any confirmed invalid of the class contemplated in this paper, *i. e.*, pulmonary disease, away from his home.

California is a marvel in what it contains of varieties of climate; from the torrid temperature of the Colorado desert to the snow peak of Shasta. To the person in health, or recovering from disease, there is, perhaps, no State in which so much variety can be obtained, invigorating and health producing.

P. S.—Since writing the above it has been my pleasure to receive from Dr. T. D. Myers, of Philadelphia, his valuable paper entitled, "Some of the Peculiarities of the Climate of California, and their Relation to the Treatment of Consumption of the Lungs," in which I find complete confirmation of the opinions I have expressed, only that his conclusions are the results of several years of personal observation, and, therefore, much more extended and valuable, and take the liberty of quoting from it the following:

"The difference between the sunshine and the shade is very striking during the winter months. The sunshine is that of the semi-tropics, while the tone and coolness of the air corresponds pretty nearly with that in the White Mountains in New Hampshire in early autumn. This wide difference between sunshine and shade is one of the strongest factors in limiting the class of consumptives who may go to Southern California during the winter with a reasonable hope of benefit."

1816 DIAMOND STREET.

PRACTICAL CASES.

BY W. BLAIR STEWART, M.D.,
BRYN MAWR, PA.

EVERY physician has his hobby and special formulæ, and could relate many interesting results of treatment. In presenting these few practical cases, it is my intention to state each one from a clinical standpoint, and allow the reader to draw his own conclusions in regard to pathology and theoretical points.

PENNYROYAL POISONING.

A hearty, robust, well-proportioned young lady, about eighteen years old, came hastily to the office in a very great state of excitement, with the statement that she was poisoned. Examination elicited a complete history. Her menstrual period was four days over-due, and, fearing a possible pregnancy, she followed the advice of a friend and took "five cents' worth of pennyroyal," about three-quarters of an hour before coming to the office. It was found later that she had taken about 2 drachms of a cheap preparation, and not the pure oil. Every muscle in her body was in a tremulous condition, and nervous chills were frequently repeated. Breath had a strong odor of the oil. Pulse was quick, unsteady, and compressible—about 120 per minute; respiration hurried and rather shallow—about 30 or 40 per minute. Hands were cold, and eyes had rather a wild, staring look.

Subjective symptoms: Had a far-away feeling, and every sound seemed to come from a great distance; hands and feet felt cold; giddiness, and occasional feeling of impending syncope. Floor felt unsteady, and seemed as if she were walking on a soft cushion; numbness of extremities, with slight sensory depression. Seemed to her as if everything she said was very ludicrous; had a tendency to laugh (probably hysterical).

Had the case been seen early, prompt emesis would have been indicated; but seeing her at the late hour, after absorption had been almost completed, she was given 5 drops of *tr. nucis vomicæ* in a little water, and requested to lie down, after being re-assured that all danger was past. Dose was repeated in one-half hour, with marked improvement. This was followed by one bottle of citrate of magnesia and the whites of four eggs, given in a little iced water. Patient reported next day feeling rather weak. Was given a tonic of iron and phosphoric acid. Menstruation appeared three days later.

Pennyroyal is derived from "the leaves and tops of *hedeoma pulegioides*," and its preparation is the *oleum hedeomæ*; dose, 2 to 10 drops, administered in hot water or some hot drink.

NEURALGIA PILL.

Most obstinate cases of neuralgia and headache have subsided under the influence of this combination when other remedies failed. It is also an invaluable substitute for the general antipyretics in every form of fever. If given every hour during the onset of an acute cold, marked improvement results. Although this combination is similar to a proprietary preparation that is on the market, it is not recommended as such. Acetanilide, alone, seems to act as a depressant, but all untoward effects are overcome by its combination with cocaine and quinine:

R.—Acetanilide,
Quininæ bisulphatis.....āā gr. j.
Cocaine hydrochloratis..... gr. $\frac{1}{16}$.
Misce; fiat in compressed tablet, pill vel capsula, No. 1.
Signe. One every hour or two, as indicated.

CARDIALGIA.

Hyperacidity of the fluids of the stomach often proves a most obstinate affection, and in many cases becomes chronic. The general practice of giving alkalies and antacids is founded on a rather uncertain basis in the major portion of the cases. Antacids are temporary, palliative remedies, and by no means curative in their action. Many of these cases respond readily to the administration of dilute hydro-chloric acid before meals. Peroxide of hydrogen, in my hands, proves itself almost a specific in this affection. (There are no specifics in medicine.) Ten to thirty drops of a fresh preparation of medicinal peroxide of hydrogen is administered in a wineglassful of water, fifteen minutes before meals, and is repeated fifteen minutes after meals in severe cases. Four chronic cases, in which no structural lesion could be found, that had persisted for five or six years, were completely cured by the administration of the peroxide for two weeks. In one case the acidity occasionally returns, but is promptly relieved by one or two doses of the peroxide. It has given great satisfaction where chronic or acute lesions exist in the stomach. Reasoning from the standpoint of the modern pathologist, the remedy is administered on the basis of antiferments (antiseptics).

DRY LABOR.

A question arises in the minds of many whether "dry" labors are more dangerous or more tedious than those in which there is a natural amount of liquor amnii. Two marked cases are here presented, not as rare cases, but in illustration of what may be expected in many others. Just what percentage of labors is termed dry is not known by the writer, but statistics do not show that these cases are much more objectional than the normal.

Case I. Mrs. ———, colored, aged thirty-one years; well proportioned; no specific nor chronic troubles. Labor pains began normally about 10 P. M. Was called at midnight and found labor progressing nicely; os fully dilated and head presenting in first position; membranes unruptured. A large, healthy girl was born about 12.30 A. M., with little or no suffering on the part of the mother. Placenta was normally expelled in about ten minutes and presented nothing unusual. During the whole labor there was not four ounces of blood nor liquor amnii lost and, in fact, her clothes were very little soiled. Child was covered from head to foot with a thick coating of vernix caseosa. This is her sixth child, and her former physicians reported every one of her births as "dry," easy, and very rapid, without any signs of laceration or abnormality of the children.

Case II. Mrs. ———, aged thirty-eight, white; rather delicate, is the mother of four children. Each labor, except the first, was very rapid; children all healthy, and absence of all traces of liquor amnii. Her first child was born with instruments after three days of pain. No evidence of liquor amnii was found by the physician in charge at the time. She is again pregnant, and the result is anxiously awaited.

FURUNCLES.

Furuncles can frequently be aborted before supuration begins by a constant application of:

R.—Menthol chrys..... ʒss.
Alcohol..... ʒij.—M.

If suppuration has commenced, the part is kept constantly wet with 1 part each of hydrogen peroxide and glycerine, and 4 parts of boiled water until pus is detected. After free incision, keep the same solution to the parts until healed. Poultices are not used by me in these conditions, as they are entirely unnecessary and of doubtful utility. Antisepsis is the principal thing needed.

INTERESTING MEDICAL CASES IN THE COURTS.

By HENRY A. RILEY, A.B., L.L.B.,
NEW YORK.

PREVENTION OF CHILD-BEARING TO BE CONSIDERED IN A VERDICT FOR DAMAGES.

IN a recent case in Alabama, brought by an unmarried woman for personal injuries, expert evidence was offered to prove that the injuries would render child-bearing perilous. This evidence was objected to by the defense, and was the subject for an appeal from the verdict in favor of the plaintiff.

The Court, in deciding the question, held as follows: "The objection to the testimony of Dr. Drennan, to the effect that plaintiff's injuries were of such character as that child-bearing would be thereby rendered perilous to life, is untenable.

"It may be that she might never have married, even had she not been injured, or that marrying, she might have had no desire to bear children, or even that desiring issue, she might not have had any, as is argued by counsel, but these considerations can exert no influence on the question."

"It is to be assumed that every physical endowment, function and capacity, is of importance in the life of every man and woman, and that occasion will arise for the exercise of each and all of them; and to that extent to which any function is destroyed, or its discharge rendered painful or perilous by the wrong

infliction of perilous injury, is the party complaining entitled to damages. We can, in other words, conceive of no physical injury wrongfully inflicted, whether entailing pain only or disfigurement, or incapacity, relative or absolute, to perform any of the functions of life, which may not be made the predicate for compensation in damages."

THE LUNACY LAW REFORM LEAGUE AND ANTI-KIDNAPPING UNION.

The Lunacy Law Reform League and Anti-Kidnapping Union, of New York, is quite a lively society and manages to keep the asylum authorities in hot water. It recently obtained the release of Mrs. Harriet Beach from the Bloomingdale Asylum, of New York City, and this lady has just sent to Governor Hill a letter arraigning sharply the management of the institution. It has also secured the release of Geo. J. Bohnen from the Ward's Island Insane Pavilion where he had been confined for six years. The superintendent of the asylum opened a letter from Mr. Albert Bach, attorney for the Lunacy Law Reform League, to Bohnen and detained it. This action Mr. Bach declares to be contrary to the postal laws and illegal, and he intends to test the matter by a suit for damages. The practice of opening letters to patients is not an uncommon one, and has grown up because it is assumed that the insane asylum is an institution similar to the State prison, where the keepers have the right to open letters.

It is very doubtful whether the superintendents of insane asylums have any right to open letters directed to patients, and the matter is so important that it should be settled in some way.

It is to be hoped that the suit will be prosecuted vigorously, and a decision obtained as speedily as possible. The Society has also just secured the release of Col. Charles G. Baylor from the Hartford Retreat for the Insane. The newspapers state that Col. Baylor, who is a war veteran, succeeded in getting a letter to the League, informing them about his condition, and after several months' investigation, a writ of *habeas corpus* was obtained. The trial of the case was to have been held a short time since but just before the time set, Col. Baylor was released by the asylum authorities.

WHAT CONSTITUTES A BODY?

Coroners in England, as well as in this country, often have a profound conviction of the value of their fees, and are to be found going with great speed to the scene of some dangerous accident.

A case of this kind, involving a knotty question, is reported in an English paper, but the solution of the problem, though, no doubt arrived at, has not been noticed in later publications. It seemed that by an unfortunate accident on the Great Western Railway, a person was killed just at the dividing line of two different counties, and the body of the deceased was left in one jurisdiction while the head was carried on into the other.

The coroners of the two counties were quickly on the field, and each claimed to have the "body" for the purpose of holding an inquest. The statute gave no definition of what constitutes a "body," and while the coroner, who had the trunk of the body, seemed to have the most to hold an inquest upon, yet the other, if he had studied the books, could have pointed to some cases which apparently held that the unearthing of the skull gave the right to hold an inquest.

The *Solicitor's Journal* gives the following as its judgment on the question: "If we may hazard an opinion on this embarrassing question, we would suggest that both the body and the head were at one time—namely, after the accident and while the train was passing on its way to the adjoining county—lying in the same county, and the fact that the engine, after the death of the deceased, carried off his head into another county, does not deprive the coroner who has got the body of jurisdiction. We think, on the whole, that the head must come back."

GRAVE STONES MUST BE PAID FOR IN NEW YORK.

The New York Legislature passed a law two years ago giving the manufacturers of grave-stones and cemetery monuments a lien upon their handiwork when placed in position over the remains of the dead, and authorized the removal in case payment was not made within six months.

The monuments or grave-stones were then to be sold at public auction to satisfy the lien. The law has been rarely taken advantage of, and, perhaps, never until recently, when the novel sight of a deputy sheriff was seen in Greenwood cemetery at Brooklyn. A crowd gathered around the workmen, who took up the stone at the order of the deputy sheriff; but no opposition was made as the proceedings seemed to be legal and regular. It has been difficult before this, to force payment of grave stones, but the new remedy will in most cases be effectual.

A SUIT FOR ANTE-NATAL INJURIES.

A suit has just been commenced against the Pennsylvania Railroad Company for \$25,000 damages by the guardian of an infant, who was injured under peculiar circumstances.

The statement is made that on October 4, 1889, three months before the child's birth, his mother, in alighting from one of the company's cars at the Powelton avenue station, was thrown on the platform through the negligence of the company's servants, and that she was badly bruised, besides sustaining a very severe nervous shock. In consequence of this shock, the physical condition of the child was impaired.

In England there have been some cases of suits for pre-natal injuries, but in this country the question of liability is a novel one, and the progress of the action will be watched with interest.

APPARATUS FOR COLLECTING WATER FOR BACTERIOLOGICAL EXAMINATION.

By SAMUEL G. DIXON, M.D.,
Academy of Natural Sciences, Philadelphia.

THE instrument about to be described is so constructed, that water may be collected and transported in it to a laboratory, and there be discharged in any given quantity into a culture medium held in either a test-tube, dish or flask, without exposure to the foreign life floating in the atmosphere.

Reference to the illustration shows a burette with glass stop-cock at "G." The upper end of burette "A" is connected with neck of glass funnel "C" by means of rubber tube "B," furnished with an ordinary compressor. The glass funnel "C" is so blown, that its top is of the same diameter as the tap from which the water is to be taken. The upper rim of this funnel is fitted with rubber tube or sleeve "D" of the same size. The upper end of rubber sleeve "D" and spitz "H" at lower end of burette are plugged with

sterilized, non-absorbent cotton wool. The entire apparatus can be placed in a steam sterilizer, and there effectually sterilized. It is then ready to be placed in a box made in any convenient style for transportation.

In practice, the method of collecting the water, provided it is furnished through a tap or pipe, is, to first permit it to flow for several minutes. Then wash the outside of tap or spigot, as well as the outside of rubber sleeve indicated by the letter "D," with a solution of bichloride of mercury (1-1,000). The cotton plug marked "E" is gradually removed, as the rubber tube or sleeve "C" is stretched over the end of the discharge tap or pipe which completes the attachment of the apparatus. At this stage of the manipulation, the rubber tube "B" is permitted to open, by releasing the compress. The glass stop-cock "G" is then turned on, this permits the water to drive out the cotton wool plug in spitz, and flow through all the respective parts of the apparatus. The water should flow for several minutes, before the glass stop-cock "G" is turned off, and the compressor on rubber tube "C" closed by means of its thumb-screw. As soon as the flow of water is shut off, the spitz should be plugged with sterilized cotton wool.

Under these conditions, you have tightly sealed in the burette a portion of the stream of water that was flowing through it continuously

from the tap or pipe from which the water was furnished, without its having been exposed in the least, to foreign substances.

Upon removing the neck of the glass funnel "C" from the rubber tube or sleeve, a sterilized cotton wool plug is at one and the same time worked into the rubber tube. The burette and its accessories, containing the water collected, can now be placed in a box or case for transportation.

To plant the water so collected the burette is placed in an ordinary holder, while the vessel containing the culture medium is taken in the operator's hand and the spitz of the burette washed with the bichloride solution, the cotton plug removed from its aperture, and the glass end worked down through cotton or whatever medium covers the vessel containing the soil. The compressor "B" is then loosened so as to permit of an air supply through the cotton wool plug that was introduced upon the removal of the neck of the glass funnel.

By a careful turning of stop-cock "G" any quantity of water desired for cultivation can be dropped into the nutritive medium.

VACCINATION in England is compulsory, and a strong prejudice exists against it. The Coventry police recently sold the goods of four anti-vaccinators, one being a local councillor who had not paid certain fines inflicted. A hostile crowd collected, and the furniture was bought in by the Anti Vaccination Society. No Coventry auctioneer would sell the goods, and a Leamington auctioneer, who conducted the sale, was hooted through the streets.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

IN putting up an arm, in the vast majority of cases, you have to use Velpeau's position, on the general principal that should the joint be lost, the position is that in which the arm will be most useful.

—Laplace.

Keratitis parenchymatosa is always a constitutional affection, associated either with scrofulous taint or syphilitic infection, and requires general treatment. It is often associated with Hutchinson's teeth. On the other hand, the other forms of keratitis are local diseases, and require only local treatment. In the parenchymatous form, do as little as possible to the eye. The books nearly all say you should use atropine. Remember that you already have a subacute iritis, and if you use a too strong solution of atropine, you abruptly break up the adhesions and cause a greater disturbance than was there before. You must depend principally on the constitutional treatment. First, you must say to the parents of the child that this is a six, nine, or twelve months trouble, because, in the course of a few weeks, they go to another physician if they do not get well. It is one of the most tedious diseases, and can only be treated constitutionally. The opacity in the cornea can only disappear by gradual absorption as the system becomes improved.

The best constitutional treatment is hydrargyrum and iodide of potassium, together with dark glasses to protect the eyes from the light.

After months the cornea may clear up; but there are cases in which, even after absorption takes place, there remains a clouding of the cornea, which cannot be removed.—Keyser.

Where a cataract is of a good, clear, gray color you may assure the patient that he is likely to have good vision after operation; but when, by concentrated light, you find the cataract of a dark brown, or amber color, you cannot assure him so readily that he will have perfect vision, because there may be some choroidal changes, so that when you remove the cataract he sees nothing more than before; he is able to distinguish light at different points, but that is all.

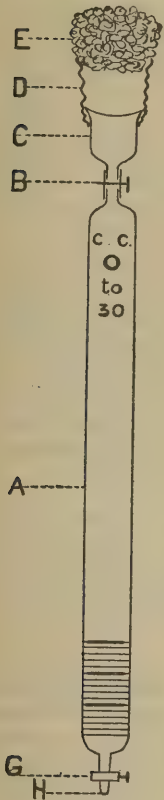
—Keyser.

The synovial membrane never is between the opposing surfaces of a joint; it runs around the margin of the articular surfaces. When you wrench your joints, such as the ankle joint, you have intense, sickening pain. This pain is due to pressure on the edges of the synovial membrane, which is on the margin of the articulation.—Pancoast.

In diseases of the joints there is great constitutional depression, and when the disease advances to marked synovitis, the pains are so exhausting that it brings the patient to the verge of destruction.—Pancoast.

On a cantharides blister, 3x4, to be applied to the knee, Prof. Pancoast ordered to be dusted gr. ss of powdered opium and gr. j of powdered camphor. This means, he says, will prevent pain and possible stranguary.

A curious confirmation of the old idea that each disease was caused by a certain humor in the blood, and that this humor was let out by bleeding, occurred in Prof. Pancoast's clinic last week. There was a



case in which the Professor thought meet to use his antiphlogistic touch, and when he had freely punctured the surface, he remarked, "My dear fellow, you have been well peppered." The patient replied, "Professor, my name's Pickle, and now that I have been peppered, don't you think I ought to be salted." May we not believe that this humor had escaped from the blood?

COOPER HOSPITAL (N. J.) NOTES.

THE TREATMENT OF PRURITUS VULVÆ.

PRURITUS VULVÆ occurs more frequently as a symptom or sequence of diseases than as an independent affection. The treatment, therefore, calls for a rigid examination as to its cause. The diseases with which it is, perhaps, most commonly associated are endometritis, cancer of the uterine cervix, and diabetes. When secondary to a uterine affection, the discharges of which irritate and inflame the vulva and cause pruritus, the treatment calls for the protection of the vulva from the discharges. The vulva should be antiseptically cleansed, dusted with a dry powder, as iodol, aristol, or bismuth, and then protected from the vaginal discharges by means of antiseptic absorbent cotton. This treatment should be carefully and persistently followed, while the cause is treated in the manner that its nature demands. If, upon investigation, pruritus is found to be symptomatic of diabetes, a local treatment of bismuth will be found serviceable. When, however, pruritus vulvæ exists independently of disease of the uterus, or diabetes, and is due to an irritable condition of the terminal extremities of the nerves, it is difficult to cure. A combination of bichloride of mercury, cocaine, tincture of opium, and tincture of aconite, frequently applied, will afford relief; but if of long standing, the application of nitrate of silver is required.—*Godfrey.*

ON THE TREATMENT OF THE DECIDUOUS UMBILICAL CORD IN THE NEW-BORN.—In the *Przegląd Lekarski*, July 4 and 11, p. 540, Dr. Godlewski (pron.—Godlevskee; a Polish name), of Lvov, Austrian Poland, publishes a very instructive paper on various methods of dressing the funis in new-born infants, the communication being based on his own extensive comparative experiments conducted in the local obstetrical clinic. The following summary embodies the salient points of the inquiry:

1. *Iodoform Gauze.*—In twenty-nine cases the cord was dressed with a 30 per cent. iodoform gauze, the dressing being changed twice daily. The stump separated, on an average, in 10.3 days. Only in five cases mummification took place, while in the remaining twenty-four a humid gangrene of the funis set in, being accompanied by a more or less considerable ulceration of the navel and, in 50 per cent. of the cases, by sarcomphalos.

2. *Bruns' Cotton Wool.*—In other forty-two cases, after dividing the cord, the stump and umbilical region were washed out with a 2 per cent. solution of carbolic acid, then dried and wrapped in Bruns' wool, the dressing being renewed twice a day. In all the infants moist sloughing developed, being accompanied or followed in nineteen by ulceration of the umbilicus, in five by sarcomphalos, and in one by umbilical phlebitis (ending lethally). The separation of the funis stump occurred, on an average, in 4.5 days.

3. *Linen Soaked in Olive Oil.*—The dressing was tried in fifty two children, being changed once daily. In sixteen cases ulceration of the navel or sarcomphalos was observed.

4. *Dry Linen* was employed in thirty-two cases, in eleven of which the navel became ulcerated, the cord falling off, on an average, in 5.3 days.

5. *Dohrn's Method.*—In sixteen cases the stump and umbilical region were covered with cotton wool, fixed with strips of adhesive plaster, the dressing being left alone for six days. On removing it on the seventh day the wool was always found to be saturated with an offensive and dirty-looking matter. In eight cases umbilical ulceration was observed.

6. *Professor V. V. Sütüghin's Method.*—In fifty-three cases the navel and the funis stump were freely powdered with pure gypsum, and the cord wrapped in hygroscopic cotton-wool sprinkled with the same powder, the dressing being changed twice daily. In every one of the cases the cord became mummified, falling off on an average in 4.8 days. The only complication observed was sarcomphalos, which occurred in four infants.

7. *Fehling's Method.*—In twenty-two cases the navel string was wrapped in cotton-wool powdered with a 1 to 5 mixture of salicylic acid and starch. In all the infants the stump became mummified, to fall off in four days. In four cases, however, ulceration of the umbilicus supervened.

8. *Runge's Method.*—In forty-six cases powdering with a 1 to 3 mixture of boracic acid and starch was resorted to. In forty-four cases the funis became mummified, but in two putrid sloughing occurred, while in nine excoriations of the navel ensued. The separation proceeded generally more slowly than in the cases of the two foregoing categories.

9. *Powdering with Carbonate of Magnesia* was used in forty cases, of which in thirty-four mummification, and in six moist gangrene, of the stump took place. In ten cases various umbilical lesions occurred. The cord fell off, on an average, in 6.2 days.

10. *Epstein's Dressing* (the ordinary linen quadrangular belly-plastron with a central cap-like receptacle for the umbilical stump) was tried in fifty cases. In every one and all of them humid sloughing appeared, while in twenty-eight cases either ulceration of the navel or sarcomphalos supervened.

The author comes to the conclusion that:

1. Hygroscopic powders in general afford the best materials for dressing the cord; and

2. Sütüghin's method decidedly should be preferred to all others yet known, since plaster-of-Paris powder fully absorbs water from the parts, rapidly induces mummification of the cord, and *eo ipso* prevents the inroad and proliferation of microbes.

Dr. F. F. Fagonsky and Professor S. S. Kholmogoroff, of Moscow, have similarly proved by careful experiments that the gypsum dressing is "the very best means for preventing any umbilical diseases, with all their grave sequelæ, including pyæmia." *Vide*, the authors' paper in the *Sei I-Kwai Medical Journal*, March, 1889, pp. 49 and 51. Professor N. F. Miller, of Moscow, obtains satisfactory results from Runge's and Fehling's antiseptic mixtures. See his highly interesting paper on "Antiseptics in the New-born," *ibid.*, February, p. 35.

—*Prov. Med. Jour.*

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INDIAN MEDICAL SERVICE.

"THE Government has assumed the medical oversight of the great body of Indians, excepting the five civilized tribes. The Indian medicine men are ignorant, superstitious, sometimes cruel, and resort to the most grotesque practices."¹ And yet the Indians are nearly unanimous in resorting to their own practitioners of the healing art, and refusing to avail themselves of the services of the Government physicians. The untutored savage remarks that occasionally he gets well when attended by his own medicine man; whereas, no mortal being ever heard of any one being cured of anything by a white man's doctor.

In conversing with the agency doctor, we find him by no means a bad sort. He has great responsibilities and very inadequate remuneration. The average number of persons entitled to his services is over 2,200, scattered over a large area; while the average pay is \$1,028 per annum, with no opportunities for outside practice, and no advancement. No examination is required for his appointment; simply a diploma, a "certificate of good moral character," and the requisite political influence. In assuming his post, he is isolated from his fellows and from civilization. He has no advice; no supervision; nothing to hope from good work; nothing to fear from bad work. He must be prepared to practise all the specialties, and dispense his own drugs; he has no nurses; no hospital; no assistants; no consultants; few instruments, and fewer books. Supplies are limited, and emergencies cannot be met, as the sources of supplies are distant, and articles needed come in a round about way, embarrassed by red tape.

Under all these circumstances it is a matter of surprise that the Government is able to secure as good material as is to be found in this service. These men say that their greatest difficulty is with the ignorance

of the Indians themselves. The afflicted savage will take a dose of the medicine dispensed to him; if no relief is experienced in three minutes, he takes another dose; if a like interval passes without the disappearance of his ailments, he swallows the remainder of his medicine at once; and, if he survives, never again resorts to the agency doctor.

Nevertheless, there are ways and means of adapting medical practice to the peculiarities of the individual, and the Indian's case is not exceptional. Great is colocynth; greater is capsicum; and greatest of all is jaborandi; while morphine, mustard oil, ether, cajeput, and many other drugs offer means for producing a wholesome impression on the Indian's mind, and convincing him that there is virtue in the white man's doses. If the savage has not patience to take the continuous dosing necessary for his scrofulous affections, he will wear mercurial or iodine plasters, or leave ointments upon his skin for a long time undisturbed by soap and water.

These things and many others could be done; but as a shrewd observer at an agency remarked to the writer: "You do not find physicians capable of such a work burying themselves in the wilderness for \$1,000 a year."

And yet the remedy is so easy. A head is needed for the Indian Medical Service; a man of capability; who should not spend his days in routine bureau work in Washington; but in traveling about among the agencies, investigating and instructing the physicians, encouraging them to take a vital interest in their work, ascertaining their needs and laying them before the authorities, with suitable recommendations. The right man for such a work would remove many obstacles that now hinder the work of the mission schools, and assist them materially in their work of civilizing the Indian.

By the systemization of this department, some real progress could also be made in the study of how to turn the Indian nomad into an agriculturist. Thus far the efforts of the Government, and of the well-meaning friends of the red man, have resulted in a series of demonstrations of what not to do. The Indian's environment has been radically changed. He has been debarred from indulgence in his natural propensities for the chase and for savage warfare; from his life of perfect freedom in the open air, with its vigorous exercise, and put to the detested work of hoeing corn; exchanging the tepee for the house; the diet of buffalo beef for pork and potatoes; he puts on store clothes and shoes that cramp his feet. With the white man's habits come the white man's diseases; against which the red man cannot oppose his white brother's inherited power of resistance. Of the children transplanted to the Eastern Indian schools, very few return to their tribes with good health. They have not the white man's adaptability to changing conditions of climate and customs, and the adoption of the civilized mode of living is the certain prelude to the extinction of the savage. No Indian tribe has survived contact with the whites. The Illinois have shrunk from over 7,000 to a hundred. The Sacs and Foxes, who under Black Hawk withstood the power of the United States, now number 47. And it may

¹ Report of the Commissioner of Indian Affairs, 1890.

safely be assumed that the wholesale slaughters recorded in the dime novel are not responsible for the rapid extinction of the native races. Whiskey is the favorite scapegoat; but it is certain that the true cause is the Indian's inability to resist the diseases of civilized man. Tuberculosis, small pox and syphilis commit depredations among the housed Indians that far exceed the effects of these diseases among white men.

The mistake has been made in endeavoring to assimilate the Indian at once with the highest development of civilization; skipping the intermediate grades. The wild savage of the plains should have rather been inducted into the semi-civilized ways of the Arab. He should have been made a herder rather than a farmer. It is true, he has none of the Arab's love for an animal, and his innate cruelty to the brute creation would prevent his becoming a model care-taker; but the transition would not be so violent, and he would probably make a better herdsman than he does a farmer.

Annotation.

HEAT-STROKE IN INFANTS.

IN the *Cincinnati Medical News*, Dr. H. Illoway describes two cases of what he denominates heat-stroke, occurring in infants. In the first case, a child one year old was seized with diarrhœa and vomiting, followed by great depression, trismus, and a temperature of 106° Fahr. in the axilla. The child recovered under the use of the cold pack. The second case was similar in all respects.

These cases would probably be attributed by most physicians to ptomaine poisoning, from decomposition going on in the intestinal canal. That very high temperature and cerebral symptoms may be produced in this way there can be no question; that they are never due to any other cause is a very different matter. There is no reason to doubt that infants may be affected by great heat in the same way as adults; and insolation may be the cause of some of the deaths attributed to cholera infantum.

Dr. Illoway exhibited good judgment in disregarding the gastro intestinal symptoms, and directing his efforts towards the most important feature of the case—the hyperpyrexia that put the child in imminent danger of death. This he overcame by the best possible antipyretic agent—the cold bath.

It is not good for a physician to become possessed too exclusively with one idea, however good that one may be. In the treatment of the "summer complaint" of infants, one must be prepared to treat hyperpyrexia by cold water, and depression with brandy, as well as gastro intestinal mycosis with the sulpho-carbolates, and many other conditions that may present themselves with their appropriate remedies. I am sure that Dr. Illoway is mistaken as to his belief that this is a new discovery. I am certain that I have referred to it in my polyclinic notes, as I have in my lectures. Nevertheless, the attention of the profession has not been attracted to it sufficiently; and if he can accomplish this, Dr. Illoway is welcome to all the glory.

CHICAGO has at last found a place to put her contagious disease cases—in the hospital carpenter shop.

Letters to the Editor.

JABORANDI IN ERYSIPELAS.

IN a case of facial erysipelas I used jaborandi, and the result was surprising. The man had before been confined for weeks to his room. This time he had only a few days of sweating and abundant flow of saliva, and he was up and out.

GEORGE B. SIMPSON, M.D.

WESTON, W. VA.

PHYSIOLOGICAL ACTION OF COCAINE.

DR. WASSERZUG has made researches concerning the action of cocaine on the circulation. He experimented upon cold- and warm-blooded animals—rabbits, cats, and dogs—in the physiological laboratory of Prof. Navrotsky, in Warsaw. The action of cocaine on the cold blooded animals is first manifested by slowing of the pulse—in small doses the slowed pulse soon regaining its normal power; but in medium doses its effects on the pulsations are graver and more continuous, so that the pulse remains below its normal frequency for a considerable period of time. In large doses the slowness becomes so enhanced as to finally arrest the heart in diastole. Toxic doses cause rapid arrest of the heart in diastole. The trigeminal nerves are paralyzed, even by medium doses. When the action of the heart ceases, direct irritation of the ventricle induces contraction. This is not the case when toxic doses are given. In warm blooded animals cocaine also slows the pulse, more acutely in carnivorous. The slowing depends upon the irritation of the trigeminal nerve, and may be prevented by a previous application of atropine. Besides, cocaine in medium amounts lessens the irritation, and in large doses paralyzes the cardiac ganglia. The vasomotor center at first is irritated, then paralyzed; but even in cases of paralysis the blood pressure is high, from the irritation of the inhibitory centers. Even in animals in which the spinal cord has been divided, the blood pressure is increased for the same reason. The central nervous system in all does not take any part in the described changes.

S. SEILIKOVITCH.

338 SPRUCE STREET.

Book Notices.

ESSENTIALS OF ANATOMY, AND MANUAL OF PRACTICAL DISSECTION, TOGETHER WITH THE ANATOMY OF THE VISCERA. Prepared especially for students of medicine. By CHARLES B. NANCREDÉ, M.D. Fourth edition, revised and enlarged by an appendix containing "Hints on Dissection." By J. Chalmers Da Costa, M.D. Thirty colored plates and one hundred and eighty-eight wood cuts. Philadelphia: W. B. Saunders. 1891. pp. 53 and 388. Price, sheep, \$2.50; cloth or oil cloth, \$2.00, net.

ATLAS OF CLINICAL MEDICINE. By BYROM BRAMWELL, M.D. Vol. I. Part II. Edinburgh. Printed by T. and A. Constable, at the University Press. 1891.

This part contains: Addison's Disease; two cases simulating Addison's Disease; melanotic sarcoma with pigmentation of the skin; and Hodgkin's Disease, with schemes for the clinical investigation of each of these affections. The colored plates are fully up to the standard of Part I. The chapter upon Addison's Disease embraces all material of value on this subject, including even the important paper of Alezais and Arnaud, in the *Revue de Médecine*, of April 10,

1891. Nevertheless the article is far from being simply a compilation. The moot points are discussed with an intelligent conservatism that will be appreciated by any reader who is really interested in this affection. Speaking of the connection between the symptoms and the specific affection of the capsules described by Addison, Dr. Bramwell says: "I see no reason why any lesion of the capsules, provided only that it is sufficiently chronic and sufficiently irritative in character, may not produce the symptoms of Addison's disease. The absence of the characteristic symptoms in cases of malignant destruction of the capsules is probably due to the fact, either that the cancerous destruction usually kills too rapidly for the production of symptoms, or—and this is the more probable view—that the cancerous lesion is not sufficiently irritating to the nerves." Adopting Alezais' and Arnaud's explanation of the dependence of the symptoms upon disease of the pericapsular nervous ganglia, he says: "In tubercular disease of the supra-renal capsules the tubercular process extends from the periphery to the center, as well as from the center to the periphery of the gland, and it has a far greater tendency than an ordinary (simple) inflammation or a new growth (cancer or sarcoma) to invade by direct continuity the adjacent parts." "New growths which originate in the supra-renal capsules usually grow from within outward, and are limited by the fibrous covering of the gland."

We regret that we have not space to devote to the other chapters of this work; which are fully as interesting as that we have discussed. We have said enough, however, to show the excellence of the work Dr. Bramwell is putting before the profession.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS, with especial reference to the application of remedial measures to disease and their employment upon a rational basis. By HOBART A. HARE, M.D., B.Sc. Second edition, enlarged and thoroughly revised. Philadelphia: Lea Brothers & Co. 1891. Cloth, 8vo; pp. 658.

We see nothing in this edition to alter the opinion expressed concerning the first. Many of the errors in the first edition have been eliminated in the second, though not all; unless the author desires to defend the word "disgestion," on page 585. In some respects this volume is a disappointment. Not but that there are evidences of much-needed improvement; but errors that were excusable in a book prepared in headlong haste for a specific object, cannot be looked upon as leniently when the author has had time for revision. And the faults are of the worst sort, in that they spring from an evident lack of clinical knowledge, of which the author appears to be unconscious. If, as the preface states, the book has been adopted by colleges as a text-book, one can only conjecture as to the possible reasons for such a choice; none being discernible in the book itself; while the objections to it are of such a nature as not to require demonstration.

PRACTICAL PATHOLOGY AND MORBID HISTOLOGY. By HENEGAGE GIBBS, M.D. Illustrated with sixty photographic reproductions. Philadelphia: Lea Brothers & Co. 1891. Pp. 313-320.

An excellent guide for the beginner in microscopic study of normal and morbid tissues. The various methods of investigation are well stated, and the data for staining and section cutting are clear and sufficient. The engravings, particularly in the chapters on morbid histology, are very fine, and the subject of phthisis, in its discussion, is especially

thorough and commendable. The book is well gotten up in its mechanical department.

THE PATHOLOGY AND TREATMENT OF GLAUCOMA. Illustrated. By PRIESTLY SMITH, Ophthalmic Surgeon and Clinical Lecturer on Diseases of the Eye, Queen's Hospital, Birmingham. London: J. & A. Churchill. 1891. Cloth; 8vo.; pp. 198.

The publication in book form of the Erasmus Wilson Lectures, revised and enlarged, is a most valuable contribution to the literature of ophthalmology. These lectures were delivered at the Royal College of Surgeons, in March, 1889, and printed in the *British Medical Journal* shortly afterward; but their preservation in more permanent form cannot fail to be very generally commended.

In his consideration of the physiology of the secretion of the intra-ocular fluids, the author concludes, as a result of careful observation and exhaustive experimentation, that these fluids are secreted chiefly by the ciliary portion of the corneal tract; that the larger part of this secretion passes directly into the aqueous chamber, forward through the pupil, and out at the filtration angle; that a very much smaller portion passes backward through the vitreous body, and escapes at the papilla, and that the hyaloid membrane and zonula which separate the two chambers are readily permeable by the vitreous fluid.

The chief conditions capable of causing the persistent high pressure in the chambers of the eye, which we call *glaucoma*, the author believes are hyper-secretion by the ciliary processes, serosity of the fluids, and obstruction at the filtration angle—the latter condition being a part of the glaucomatous process, in the great majority of cases. Many ophthalmologists maintain a different theory regarding obstruction of the filtration angle; but the present writer's carefully and clearly expressed views certainly can hardly fail in convincing the majority of his readers.

In the line of treatment nothing is offered that can be called new; but the suggestions as to the selection and employment of the limited resources at our command are excellent.

Sixty-four new and well-executed wood engravings, and twelve photo-zincographs abundantly illustrate the text. In the matter of general appearance—paper, typography, etc.—nothing is left to be desired.

The Medical Digest.

POISONING FROM NORWAY SPRUCE.—L. M. Houser (*Med. Bulletin*) describes the case of a girl eight years old who had chewed the gum from a Norway spruce. She was running through the house seeing white rats, mice, etc., but could see no real objects as she ran against the furniture. The temperature was normal, tongue clean, pupils fully dilated. The symptoms subsided without special treatment.

LONG PREGNANCY.—In *The Lancet*, James Oliver records the case of a woman who came to him October 29, 1890, 238 days from her last menstruation. She was found to be pregnant, the foetal heart was detected, and the uterus reached to the level of the umbilicus. She was delivered March 23, 1891, or 383 days since the cessation of her last menstruation. The woman was thirty years old, married nine years, and had had one child, a year after marriage.

WATER HEMLOCK appears to figure as the cause of accidental poisoning with unusual frequency. O. A. Rhodes (*Med. Bulletin*) speaks of four boys who had eaten the root, supposing it to be "sweet myrrh." They had gastro intestinal irritation and severe tetanic spasms. Death seemed imminent from fixation of the respiratory muscles. The treatment consisted of emetics, evacuants, enemas and bromides by enema; followed by hypodermics of physostigma and chloroform by inhalation. All recovered.

TREATMENT OF DIPHTHERIA BY CYANIDE OF MERCURY.—M. de Ruelle said he obtained good results from the use of cyanide internally, recommended by Werner and Lœfler, and as follows:

Cyanide of mercury	1 grain.
Alcohol	3ij.
Water	3vij.

A teaspoonful every hour.

Of the seven cases he treated of children between two and four, not one terminated fatally.

—*Medical Press.*

THE *Country Doctor* favors the opening of the Columbian Exposition upon Sunday. He thinks very few people will go to Chicago for the benefit of their souls, anyway; but rather for amusement, instruction, or lucre. As long as Sunday base-ball, beer, theatres, etc., go in Chicago, it is hardly worth while to draw the line at the Exposition. Still, if the pulpit and the saloon join hands in favor of closing the counter-attraction, it will probably be done. We trust that no such farce will be enacted as was shown in Philadelphia, when the buildings were closed to the poor man, who could not attend on week-days without losing the time from his work, but thousands on thousands of the friends of the managers were allowed to visit freely on the Sabbath.

A THEORY OF SEX.—Each foetus at its outset rests in equilibrium as regards its sex. Something occurs that gives a bias to the male or to the female side. Subsidiary causes, heredity, temperament, and other influences, may also operate to this end; but to nutrition, even from the period of the ovum and its fertilization, I attribute the main cause of sex differentiation. I take it for granted that menstruation is really ovulation. Prior to fertilization there can be no question of sex. Fertilization alone determines the beginning of embryonic development, and my theory of sex, therefore, holds that when an ovum is fertilized before menstruation it will develop a male, while if the ovum is impregnated after menstruation it will result in a female conception.

—Andrew Wilson, in *The Lancet*.

RESORCIN.—In the sick diarrhoea of young children, Dr. Menche gives, first of all, calomel, even in the first month, $2\frac{1}{4}$ grains, divided into quarter-hourly doses of $\frac{3}{4}$ of a grain; to children over one year, three times as much is given. Generally, after four to five hours, the sickness has disappeared, and then resorcin is given, $\frac{5}{8}$ grains in 4 ozs., one teaspoonful every two hours. In weak children the calomel may be omitted, and the resorcin given at once with good success. Equally good results were obtained in various forms of gastritis from the administration of tablespoonful doses of a 2 per cent. solution. In gastric catarrh with simultaneous constipation, the author prescribed:

R. Infus. rhei	3iv. : 3ix.
Tinct. amar.	
Tinct. rhei vinos.	āā 3j.
Resorcini resub	3ss.
Elæosacch. menth. pep.	3iiss.
M. One tablespoonful every two hours.	

The action of resorcin proved successful in combating the sickness of pregnancy, in peritonitis and in sea sickness; it seems to have an anodyne effect upon the gastric nerves, and in larger doses a similar influence on the central nervous system, so that good sleep was attained in typhus, phthisis, and general nervous excitability, by doses of 4 grains.

—*Provincial Med. Jour.*

THE TRANSMISSION OF TUBERCULOSIS TO MAN.—Further evidence in support of the view that the cow may transmit tuberculosis to the human being through milk has been adduced by Dr. Ollivier, one of the physicians of the Paris Hospital for Sick Children. He was called to a young lady, aged twenty, suffering from tubercular meningitis. He found on inquiry that her personal antecedents and surroundings were unexceptionable. She had, however, been placed at a small boarding-school, inquiries at which resulted in the discovery of the fact that the establishment had been heavily visited by tubercular disease, six of the thirteen scholars having contracted some form of the malady during the preceding four years, the case in question proving fatal in a short time. Further investigation revealed the source of sickness, namely, the cow, which was brought daily to the place to be milked. The produce was consumed in an uncooked state, and the cow was found on examination to be suffering from tuberculous lesions of the udder. These discoveries are regarded by Dr. Ollivier as amounting to proof positive of the source of infection, and has led him to advocate more strongly than ever the boiling of milk before ingestion.—*Med. Press.*

CANCER OF UTERUS TREATED WITH PYOKTANIN.—Anterior wall of vagina about 4 cm. from introitus, the whole width of the vagina was implicated, extending up to the blind end of the cavity; of this about six cm. long and five broad was a hard infiltrated mass covered with normal mucous membrane, unless one part that was ulcerated. The inguinal glands on both sides were greatly enlarged. At this stage the injections were commenced, one every third or fourth day, with a solution of pyoktanin 1 in 500. Although the solution was injected into the healthy surrounding tissue with a Pravaz syringe, it rapidly trickled out at the ulcerated part of the hard mass, which entailed more frequent injections as the case went on. The whole quantity injected was forty grammes of the above fluid 1 in 500 (circa eighty milligrammes). The hard resisting tissue gradually began to soften and melt away, leaving a sort of skeletal frame as a remnant of the swelling. The patient was dismissed from hospital on the 28th of April—about two months—undoubtedly very much improved, and certainly free from all pain.

Prof. Dittel, in the discussion, doubted the "Sanatio" in this case. It is possible that there was an improvement in the patient, even though an admitted carcinoma, but he told them that he had been present that very day at the post-mortem examination of two carcinomatous cases where the "Tinktionsmethode" had been diligently applied without any perceptible good effect; in one of the cases gangrene had been induced.—*Med. Press.*

DIAGNOSIS BETWEEN URÆMIA AND EPILEPSY.—

URÆMIA.

EPILEPSY.

During the attack the face is pale and the breathing easy.	Face tinged and breathing stertorous.
Consciousness may be partially recovered, followed by relapses of coma.	Never noted.
Kidney lesion always present.	No kidney lesion.
A condition most frequently present in advanced life.	Most frequent in early life.
Traumatism very rare and syphilis infrequent, atheroma often present.	Traumatism, syphilis and atheroma are frequent causative factors in late epilepsies.

The above table may serve as a rough guide in reaching a hurried diagnosis, and will aid in examining a person found unconscious; but in closing we cannot refrain from expressing the necessity of carefully examining the urine in all cases of convulsions, especially those of middle and advanced life.

—Moyer, *Med. Mirror*.

THE ALIMENTARY ORIGIN OF ARTERIO SCLEROSIS.—In addition to the known causes of this common condition—the specific fevers, gout, rheumatism, syphilis, alcohol, tobacco, lead—M. Huchard brings to our notice another factor—viz.: excessive indulgence in animal food, or the constant ingestion of meat which is either of bad quality or is too “high.” The toxic symptoms brought on by this habit—viz.: vertigo, certain forms of delirium, dyspnoea—are aggravated by renal insufficiency, which, by favoring the retention of ptomaines in the system, brings on arterio-sclerosis. M. Huchard ascribes the increasing prevalence of this pathological condition to the fact that the well-to-do habitually consume too much meat, much of it being “high.” Their poorer neighbors suffer similarly because the meat they consume is not freshly killed, and consequently contains a quantity of ptomaines. M. Huchard advises, then, as a precaution against the inroads of arterial degeneration, the restriction of well-cooked fresh meat to one meal a day, with the more generous use of vegetables and milk. Professor Verneuil calls attention to the observation of M. Reclus that vegetarians are less liable than meat eaters to cancer, and he strongly urges practitioners to do their utmost to restrain the consumption of nitrogenous food to a standard compatible with the excretory powers of the individual.

SOME NEW HEART AND NERVE TONICS.—Dr. Brown Séquard's famous elixir has been the subject of many pleasantries, but the employment as therapeutical agents of extracts of organs or animal tissues seems nevertheless to be gaining ground. In a case of heart failure, M. Onimus, of Monaco, has had recourse to the subcutaneous injection of an extract of heart muscle, and he claims that this novel medication determined the disappearance of the orthopnoea. The other symptoms—shortness of breath, debility—were diminished by similar injections of a glycerine extract of spinal cord. In a typical case of glosso-labio-laryngeal paralysis, which had reached the last stage, great benefit is said to have been derived from the use of these nerve extracts, and similar results are said to have been noted in cases of transverse myelitis, chronic spinal meningitis, and early locomotor ataxia. MM. Boinet and Boy-Teissier have been recently studying the effects on the heart of an extract of cactus grandiflorus and of its alkaloid, cactine. Tried on frogs, guinea-pigs and tortoises, the extract was found to increase notably the energy of the cardiac

contractions, the effect being ephemeral, but readily reproduced by renewed doses. After the injection of eight or ten centigrammes the contractions were slowed and rendered arrhythmic. The alkaloid cactine, injected in doses of from one to ten milligrammes, strengthened the contractions permanently, without exciting slowing or irregular action. A clinical trial has been made of a tincture of cactus, and the drug is found to act as a heart tonic in functional and organic diseases, without becoming accumulative in its effects. Large doses were given at frequent intervals (120 drops per diem).—*Lancet*.

APERIENT PILL.—For a number of years I have used an aperient pill which has given me personally great satisfaction in my practice, and upon which I settled after a number of experiments and combinations:

R.—Ext. hyoscyami..... gr. x.
Ext. aloes aquosi,
Ext. colocynthis comp..... āā gr. xx.
Potassæ et sodæ tart..... gr. xxx.

M. et in pil. No. xx divide.
The colocynth must be Squibbs.
Dose, one at bed time.

—Bauer, *St. Louis Clinique*.

CONVULSIONS.—Was called to a child in convulsions. Found the child with teeth set so firmly that a spoon could not be introduced between them. Eyes fixed and glassy. Breathing jerky on account of spasm of the diaphragm.

The mother said the bowels had begun to run off in the earlier part of the day, and that there was also some vomiting. The child was twenty-three months old, and had always been well. Head was hot and extremities were clammy. I diagnosed cholera infantum, and went to work.

A hot foot bath was given, and arseniate copper (gr. $\frac{1}{100}$) placed in a half glass of water. The case being desperate, and not caring to trust new remedies for the nervous phenomena, some potassium bromide was added to the above, and teaspoonful doses given every few minutes, by pouring it into the side of the mouth where there were no teeth. This was kept up for half an hour, together with the application of a sinapism to the belly.

At the end of this time no improvement was apparent. In fact, the little fingers began to clutch, and hiccoughs appeared. I decided to try hyoscyamine. Gave one granule (gr. $\frac{1}{100}$); in ten minutes another. In ten minutes more the clutching of the fingers had ceased, the child turned his head and recognized his mother, then closed the eyes, and in little over an hour from the time I first saw him, he was asleep. The spasm of the diaphragm was not completely overcome, but was very slight, and improving. Three days after the attack he was well,

—Sterrett, *The Alkaloid*.

HIGH TEMPERATURE.—On May 4, a thermometer arrived which would register 150° F. At 4 P. M. this was tried, and registered 138½°; at 6 P. M. 152°, and at 7 P. M. 98°. The temperature then remained at or near normal until about 7 A. M. the next day (May 5). It was then found to be rising, and our new Chicago thermometer registered 111½°; at 8 A. M. 130°, and at 9 A. M. it was placed under the tongue, and in three minutes was taken out, broken in three pieces. The mercury can, to this day, be seen standing at the top of the tube. This thermometer was graduated to 150°, but as the mer-

cury now stands at the top, at least 7° above the graduation marks, it will be seen that at 9 A. M., May 5, the temperature of this patient was great enough to run the mercury to 157° F., and so expand it that the pressure by *expansion* in the confined tube *actually burst the instrument*.

This patient, a remarkably bright girl of fifteen summers, not of a nervous temperament; having menstruated perfectly normally for more than eighteen months; having enjoyed average health all of her life, began with a tonsillitis which was never severe, and lasted only about a week, developed, without any known cause, this extraordinary range of temperature, which lasted about six weeks, having had from one to three paroxysms each day; the paroxysms lasting at first about three hours, and gradually growing shorter, until, toward the last, the temperature went from normal to the top of a Hicks thermometer in a few minutes, and declined to 96° in almost an equally short time. During the paroxysms the subjective symptoms were: Intense coldness, requiring half a dozen blankets, hot bags of water, etc.; nausea, and, at times, vomiting. She also complained of "numbness," beginning in the face, and extending to the body. The objective signs were pallor and lividity of face and extremities, these appearing cold and the body warm, but not hot. The tongue was generally coated, but rarely dry. The pulse never ran over 120, and generally under 100. The urine was normal, examined both chemically and microscopically, and nothing worthy of note found. Digestion impaired; bowels inclined to constipation, but no serious trouble; menstruated normally during the attack. At times, some tenderness in splenic and hepatic regions. At one time developed considerable tenderness in right iliac, and along the ascending colon—lasted about a week. Convalescence rapid, and she has since enjoyed perfect health; but recently has had an intermittent fever of rather mild type, and has developed no unusual symptoms.

—Heber Jones, *Memphis Med. Monthly*.

CHLORALAMIDE.—In previous communications on insomnia, I have praised particularly the action of paraldehyde. I still have a high opinion of it, but in convenience and agreeableness to the patient it is far surpassed by both sulphonal and chloralamide. Comparing the latter two, in my experience sulphonal can be given in a smaller dose than chloralamide to produce the same effect, while chloralamide acts more speedily, is more readily dissolved, and is followed neither by delayed sleep, nor the mental confusion and dullness which I have noticed after the administration of sulphonal.

Only one patient has complained of the *taste* of chloralamide, and she was in a very dyspeptic state the first time she tried it, and speedily recanted.

It seems to have little effect on subduing pain, as my failures with it were in cases of rheumatic joint pains, acute headache, and sciatica.

In only one case have I found headache *after* the drug, and that case was one of violent headache, vomiting, and pain in the abdomen, due to over excitement and dietetic error. Even here the headache disappeared at once after a cup of tea.

In the insomnia and delirium of the acute fevers such as influenza, and acute pneumonia and pleurisy, it acts very satisfactorily, and is, I think, within ordinary limits, perfectly safe.

Two of my cases were children, aged fourteen and nine; both were cases of influenza, and the drug was very successful in overcoming that restlessness going on to delirium which is so common in the febrile complaints of children. Chloralamide should be very useful in the treatment of children's sleeplessness. I am only sorry I have not more cases of this kind to report.

Also, in nervous insomnia from hard work, worry, and anxiety, chloralamide, given in a fairly large dose, say 30 to 40 grs., is almost certain to be followed by a refreshing sleep.

In mental disease (one case of which I have recorded) its action is good, but I think sulphonal is more powerful than chloralamide, and can be given—as in hot milk, etc.—with perhaps greater ease.

It certainly is better than paraldehyde in cases of lung trouble, as it does not provoke cough or disturb the stomach, as the latter drug is somewhat wont to do.

In delirium tremens again, especially in the stage immediately preceding an actual outbreak, I believe it is of very great value. During an attack it can be freely used without any fear of prejudicial action on the heart, such as may be feared from chloral and opium. Generally speaking, though my cases are too few to draw final conclusions from, chloralamide reduced the frequency of the pulse, and made it fuller.

It has one great advantage over its fellows, that patients do not get accustomed to it, and so want larger doses; in fact, in several of my patients the drug seemed (after its effect for the night or nights) to produce an excellent habit of going to sleep without a draught. Personally, I may say that on several occasions, when I have come home after a night-call, and have been utterly unable to sleep, 10 grs. of chloralamide has brought about sleep in a quarter of an hour, which have lasted for six or seven hours, and then I have woke up feeling perfectly refreshed.

For adults, 30 grains (in women, 20 grs.) has generally been sufficient. I give it with a little dilute hydrochloric acid and some syrup. The greatest objection to it is that it is not very readily soluble.

—E. M. Sympson, *The Practitioner*.

GERMAN NOTES.

HERMAN D. MARCUS, M.D.

SOZOJODOL PREPARATIONS.—1. Zincum sozodolicum $\frac{1}{2}$ to 1 per cent. solutions. A good astringent in the treatment of gonorrhoea.

2. Potassium and sodium sozodolicum. Used as dusting powder like iodoform. Has no specific influence on syphilis.

3. Hydrargyrum sozodolicum. One of the best antisiphilic remedy, in the form of subcutaneous injections. Experience teaches that one injection weekly is equal in its action to a treatment of gr. vi (weekly) by inunction. No abscesses form at the place of injection. The formula for the injection is:

R.—Hydrarg. sozodol	..... gr. xij.
Potassi iodidi	..... gr. xxiv.
Aquæ dest.	..... ℥iiss.

—Schwimmer, in *Wiener Klin. Wochenschrift*.

ICHTHYOL.—A. W. Freund (*Berl. Klin. Wochenschrift*) uses ichthyol in his gynecological practice, both externally (ichthyol glycerine tampon) and internally. He praises its re-absorbing qualities, which help in curing in the shortest time old parametritic exudates, metritis, etc.

Reitmann and Schoenauer (*Wiener Klin. Wochenschrift*) endorse Freund's observations, and add that ichthyol is of great benefit in the treatment of new inflammatory processes. They also recommend it on account of its remarkable soothing properties. Freund, commenting on Reitmann's and Schoenauer's observations, says that ichthyol should be used with great caution in new exudates; he also reports a very interesting case of endometritis glandularis, which was cured by wiping the uterus with ichthyol.

Bloch (*Wiener Med. Wochenschrift*) found better results with the ichthyol treatment in acute inflammations, such as acute blenorrhagic catarrh of the vagina, new parametritic exudates, painful erosions of the cervix, than in chronic inflammations.

Koetschan (*Muenchner Med. Wochenschrift*) reports 120 gynecological cases treated with ichthyol. He recommends this drug on account of its painless and non-dangerous, though positive, beneficial action. He prescribes the drug internally, in pills—($4\frac{1}{2}$ grs. daily).

Mueller (*Australian Med. Gazette*) recommends ichthyol as an excellent remedy in skin diseases.

Stocquart (*Arch. de Méd. et de Chirurg. de Bruxelles*) calls ichthyol a remedy "which is able to combat the nervous phenomena appearing in gastrointestinal dyspepsia."

Unna (*Monatsheft f. Dermat.*) publishes a new mode of using ichthyol, that is to say, in the form of a varnish, which may be used in certain affections of the skin. The formula is:

R.—Ichthyol,
 Starch.....āā 3j, 3ij.
 Sol. albumen gr. xv, gr. xxij.
 Water.....ad 3ijj, 3j, gr. xxxxiij.

—*Deutsche Medizinal Zeitung.*

CONTAGION OF SCARLET FEVER.—Vienna medical journals report the following interesting case:

A family received from a friend a letter, notifying them of the death of the sender's child from scarlatina. Seven days later, scarlatina broke out in the receiver's house.

The supposition that this case was caused through germs in the letter is substantiated by Army Surgeon Dr. Assmann, in Wohlaw. He says:

"Last March an officer's family received a letter from some friends informing them of the sickness of the sender's children. The disease was scarlet fever. The youngest boy of the officer played with the envelope containing the letter. Six or seven days later he was taken down with scarlatina. Later on, two more children developed scarlet fever. That the scarlatina was due to germs contained in the letter seems to be highly probable, as no case of scarlatina occurred in or around the city for more than six months, and none of the family came in connection with patients suffering from scarlet fever."

The *Gazette Médicale de Nantes* reports a few cases in which dogs and cats had propagated the disease.

COLD AS A LOCAL ANÆSTHETIC.—A very interesting operation was performed by the well known surgeon, Dr. Kuemmel (Hamburg), in the Hamburg Mary Hospital. He used fluid carbonic acid, which, through concentration on the limb to be operated on, produced excessive cold, and made the member insensible to pain. The operation was performed on a thirteen year old boy, who witnessed the incision ($4\frac{1}{2}$ in. long) without showing the least signs of

pain. Eminent physicians who witnessed the operation are unanimous as to the positive success of this experiment.

Medical News and Miscellany.

AMŒBA'S LOVER.

A neat bacillus, with rounded ends,
 Was seen, by means of a powerful lens,
 Moving with undulatory grace
 Through a fashionable lymphatic space.

His graceful appearance would take with some,
 As he picked his teeth with a flagellum;
 Though he flirted in a way to shock us,
 With every common gonococcus.

His manners were good—every one knew it—
 For he'd been through a fine culture-field.
 But his tailor's efforts were all in vain
 To collect a bill for this germ's membrane.

His mind was filled, one might say wholly,
 With thoughts of sweet Amœba Coli.
 Her mobile form, 'twas his conjecture,
 Languished within the sigmoid flexure.

So hurrying through an abscess rancid,
 To an artery of rapid transit,
 He took, in a depot of congestion,
 A blood-disc bound for the large intestine.

In the parlor-car he chanced to see
 A plasmodium malariae.
 A pretty picture she seemed to make
 As she fed her spores on ague-cake.

And then he thought of the bliss in store—
 Of Amœba and a baby spore!
 And how they'd dwell in a sacculle neat
 In a calm and scybalous retreat.

But just as he reached Amœba's door
 He heard a protoplasmic roar;
 And there, repulsive in his might,
 Was a hungry, savage phagocyte.

His mouth was large and his words profane,
 So our hero drew his good ptomaine.
 "Swish! snap!" went a pseudopodic jaw,
 And "gulp!" went a phagocytic maw;

While his mistress saw a vacancy
 Where her loved bacillus used to be.
 Then Amœba, with a doleful shiver,
 Went far away to the dismal liver.

—*Lancet Clinic.*

Leprosy is spreading in Japan.

DR. MAJOR T. IRWIN was killed by a train at Englewood, Ill.

MALIGNANT diphtheria has broken out at Fairview, Illinois.

A CORN is convincing proof that Nature is capable of small, mean things.

A LONDON milkman has been fined for keeping his milk in a dirty stable.

DR. S. S. SCHULTZ, Superintendent of the Danville Insane Asylum, is dead.

BEEFSTEAK and black coffee are said to have reduced a lady of 182 pounds to 140.

IN 1890 there were 48,426 samples of food and drugs analyzed by the London authorities.

DR. J. L. MASSIE, of Owenton, Kv., is said to have shot a neighbor for "talking about him."

A WYOMING doctor was sent to jail for drunkenness, set fire to the building and was burned to death.

SIR MORRELL MACKENZIE says there is no objection to clergymen smoking, provided they use good tobacco.

A MILD outbreak of scarlatina has occurred at Girard College; about 40 out of the 2,000 inmates being affected.

SECRETARY RUSK has found that in inspecting meat with the microscope for trichina, women do better than men.

POTAIN relates a case presenting all the symptoms of typhoid fever except the temperature, which did not rise above 99°.

GLASGOW is still endeavoring to prevent the sale of tuberculous meat; but a new and horrifying case has been brought to light.

At the last Paris Exposition, 337,300 bottles of champagne were drank. But just wait 'till you hear from the Chicago Columbian.

TYPHOID FEVER has appeared at Newmanstown, Pa., where nineteen persons are reported as down with this disease, and three dead.

A BULL-FIGHT held in the City of Mexico, October 18, netted \$25,000. The proceeds are to go to the sufferers by the recent floods in Spain.

MONTREAL has well-grounded apprehensions of a renewal of the small-pox epidemic of 1885. Forty cases have been reported in the province.

AN Ohio dentist advertised: "Teeth Pulled while you Wait," but the printer had been there and he made it, "Teeth Pulled while you Wail."

WANTED.—One copy of THE TIMES AND REGISTER, February 28, 1891. Any one having a surplus copy will oblige us by sending to this office.

IN the Chicago Criminal Court it has been discovered that the air for the furnaces was drawn by a steam fan from a pit filled with loathsome filth.

THE Rev. A. Murphy, the new Presbyterian pastor in Springfield, married Dr. N. E. Myers and Nellie Mulholand before taking out his necessary license.

COLONEL HUFF, John Rodgers and John Spencer, three well known Pittsburgers, have died within a few weeks, while under the Keeley treatment for the alcohol habit.

DR. SEYMOUR BULLOCK, a prominent G. A. R. man, of Mobile, Ala., was shot dead, on October 15, by Thomas P. Brewer. Dr. Bullock's name is not in Polk's Directory.

ON October 9, Professor Keen removed a cystic tumor from the liver of a woman, forty-four years of age. The Paquelin cautery was employed. The mass was as large as a man's fist.

DR. A. F. CHASE, of West Philadelphia, was sued for malpractice, recently, by a patient who claimed that he had not properly attended to a severed tendon in her leg. The plaintiff was non-suited.

DR. S. WEIR MITCHELL's immediate return to Philadelphia has been delayed by imperative engagements elsewhere. Dr. Mitchell will not resume his practice, it is stated, for several weeks.—*Ledger*.

THERE is a Chinese leper in the pest house of Hudson county, N. J., and the asserted occurrence of the same disease in a citizen of that county, has caused a report highly derogatory to the New Jersey mosquito.

THIRTY candidates for office in the British Mercantile Marine were last year rejected for color blindness. Several succeeded subsequently, showing that lack of education of the color sense is sometimes the difficulty.

WE are clearing out our files, and any of our subscribers who desire to complete their volumes for binding should send at once for missing numbers. We can have the binding done very handsomely and at little cost.

WHILE Dr. H. E. Jones, of Anderson, was performing the operation of intubation upon a child ill with diphtheria, the little sufferer bit one of his fingers, causing a slight abrasion of the skin. Blood poisoning followed.

THE French Republic has conferred a medal on a Lyons physician for the devotion and skill displayed by him during an epidemic of diphtheria. Many a physician has received a crown of martyrdom for the same reasons.

ONE of the bright genii rescued from the fell grasp of the plow and commissioned to do medical, surgical and obstetrical murder by Buchanan, has reported that he "succeeded in introducing a cathedral and drawing off the water."

DR. MOORE (*Kan. Med. Journ.*) removed three hundred and ten screw-worms from the nose of a young man, during ten days. He found the best remedy to be mercurial ointment and petrolatum, p. a, applied by atomizer.

IT would, no doubt, be greatly to the benefit of students if the whole class of students' aids, digests and pocket book companions, and aids to examination and the like, could be summarily extirpated from literature.—*Brit. Med. Journal*.

ÆSCULAPIAN LODGE, No. 2,410, was instituted, October 2, by the Grand Lodge of England, in the Masonic Temple of the Café Royal. This is the second Masonic Lodge of Physicians in London, the other being the "Galen, No. 2,394."

DR. DUCKWORTH, of Kearney, Neb., reports, in the *Archives of Gynecology*, the case of a young woman whose temperature reached 228° F. Talk of the blood boiling! Here we have it really being done, and the patient survives to tell the tale. Next!

A ST. LOUIS physician recalls the case of a young man who had been dumb for five years, but who, while out hunting one day, began, in the excitement of the chase, to yell at the top of his lungs. Afterward he was able to speak with perfect articulation.

ST. MARY'S Orphan Asylum, of New Brunswick, has been compelled to close on account of a contagious skin disease that baffled all efforts at control. It is supposed to be scabies; but in that case it is difficult to see wherein lies the impossibility of cure.

DR. W. E. HUGHES addressed the Alumni Association of the College of Pharmacy on "Greenland and the North Pole." We are happy to state that the pharmacist at the latter locality never, never substitutes, repeats prescriptions, or prescribes over the counter.

A TYROLESE surgeon, in trying to extract a bean from a boy's ear, broke the drum; inflammation ensued and the boy died. The surgeon was censured by the Innsbruck Faculty of Medicine, and required to submit to an examination in surgery before resuming practice.

AN enterprising Parisian furnishes mercantile houses good advertising matter, in bogus prizes from a supposititious exposition in Corsica. It matters but little, however, as after 1893 no exposition prizes will be worth bragging about unless they bear the name of Chicago.

THE Board of Health has directed its Sanitary Committee to prepare an ordinance providing that air-tight "dunnigans" must be used in removing scrap fats and meats from market and slaughter houses and provision stores, from the first day of June until the first day of October.

SOME men have their fortunes thrust under their very nose, and yet haven't sense enough to see it. A flour mill in Ohio has been compelled to shut down on account of the number of eels that choked up the water-wheel, so that every few hours it was necessary to stop to clean them out.

UNDER what is known as the Enabling Act, there is appropriated to the State of South Dakota 720,000 acres of public lands for the support of educational and charitable institutions. Of this amount, 168,000 acres have been filed on, and 125,000 acres selected.

Here is a chance for a medical college.

A GERMAN court has decided the legal point of whether menstrual blood can be diagnosed. Franke made a microscopical examination, but could not detect any of the broad epithelial cells of the vagina; and this point caused the conviction of the accused woman, who confessed to her husband's murder.

AFTER the meeting of Geologists in Washington last August, a large number of the visitors made a trip through the Yellowstone Park. Thirty-five of these went through the Grand Canon of the Colorado. The trip is graphically described by Dr. John R. Haynes, in the Los Angeles *Express*, of October 2.

A MOST remarkable alloy of gold and aluminum is now under the examination of scientists. It is of a beautiful, rich purple color. This royal metal will make a handsome addition to those now used for purposes of adornment. From all accounts, it seems amenable to the methods of jewelers in making their gold ornaments.

CAMBRIDGE University has prohibited the game of hockey. This, we believe, resembles closely the game of shinny; in which we can testify there is none better adapted to the education of youth in the way of getting thumped. A five-minute scrimmage of a boys' school is as good as an epidemic to the local practitioners.

HERMANN states, as the result of experiments on dogs, that the feces are largely made up of intestinal excretion, and not of food and bile. Parts of the small intestine were shut off from the rest, and both ends tied, when the animal died; these were found to contain fecal matter, only differing by the absence of food and bile.

DR. S. WEIR MITCHELL, the eminent specialist, after spending several months in Europe, and, subsequently, visiting Washington, as President of the American Medical Congress, which recently met in that city, has returned to Philadelphia, and resumed the practice of his profession.

We trust none of our readers will do this great man the injustice of mistaking the above for an advertisement. It is only a "personal" from the *Public Ledger*.

DR. W. A. FORD re-opens his Sanatory Gymnasium, this month, at 1420 Chestnut street, Philadelphia. Physical exercise, under scientific direction, is of great value in the treatment of chronic heart and lung diseases, hepatic disorders, constipation, dyspepsia, neurasthenia, insomnia, chorea, writers' cramp, paralysis, rheumatism, chlorosis, lateral curvatures, and kindred affections and deformities.

THE report of Dr. Austin Peters, Chairman of the Committee on Intelligence and Education, to the Twenty-eighth Annual Meeting of the United States Veterinary Medical Association, held September 15, 1891, will be interesting to the profession in Nebraska, and not altogether without interest to the farmers and stock-growers of the West. It completely vindicates the work of Dr. Frank S. Billings, of the University Experiment Station, and puts the Bureau of Animal Industry, at Washington, in a bad light.

THE English journals have gotten hold of some smart American. Several of our trans-atlantic exchanges quote an "American physician," who succeeds in collecting his obstetrical fees by persuading the parents that bad luck would otherwise follow the offspring.

We fancy that practitioner's operations lie mainly among newly-landed emigrants. The American dead-beats would consider such a doctor their special brand of pie.

THE periods of gestation are the same in the horse and ass, 11 months each; camel, 12 months; elephant, 2 years; lion, 5 months; buffalo, 12 months; cow, 9 months; sheep, 5 months; reindeer, 8 months; monkey, 7 months; bear, 6 months; sow, 4 months; dog, 9 weeks; cat, 8 weeks; rabbit, 4 weeks; guinea pig, 4 weeks; wolf, 90 to 95 days. Goose sets 30 days; swans, 42 days; hens, 21 days; ducks, 28 days; pea hens and turkeys, 28 days; canaries, 14 days; pigeons, 14 days; parrots, 40 days.

IF there is one thing dear to the heart of the Englishman it is his beer, and from the time of the Saxons downward he has liked it strong and heavy. It therefore marks a new era in the national taste when the fact is established that lager beer is steadily and largely increasing in public favor in England. Its possible influence on the health of the average Britisher is referred to in a letter on the subject in an English paper. The writer says: "Is it true, I wonder, that lager, unlike English ale, is free from gout-creating qualities? If that be the case the more it replaces the latter the better for public health. Gout is the great enemy of this generation."

A GOOD many people are unaware that oilcloths, and especially linoleum, should never be scrubbed with a hard brush. Neither should hot water or soda be used. The best way is to wash them with warm water and ordinary yellow soap, and wipe thoroughly dry. Once and again it does good to rub them over with a mixture of linseed oil and vinegar, after they have been well cleansed, or they can be considerably brightened by a simple application of milk.

DR. BRYCE evidently believes that some society needs shaking up, judging from the following extract from his *Southern Clinic*: With all purely scientific societies in which the meetings are held for friendly and mutually instructive purposes we are in full sympathy. But with organizations whose sole purpose of existence is to pay one or two men all of the funds received from the members, to have a drunken carousal at the end of their annual meetings, and to give their time and space in the transactions to a few blatant advertising specialists from a distance, we are a sworn enemy.

"WHERE SHALL I SEND HIM?"—This question often arises before the physician, and occasions much perplexity. To obviate this, we have had prepared tabular statements, giving the names and locations of all the Philadelphia hospitals, homes, dispensaries, day nurseries, etc., together with their rules, class of cases admitted, terms, names of staff, and all other information to show just who should be sent to each and how to go about it. These tables will be published by instalments, before the close of this year. In our next number will appear the data relating to the hospitals.

A MEDICAL student of Vienna the other day telegraphed to his father, a well-to-do farmer, to forward him fifty gulden to purchase, as he said, a cow to enable him to further his studies as an inoculator. The indulgent father, who considered himself a very good judge of cows, hastened to Vienna and purchased a splendid specimen. It now appears that the prompt arrival at the son's residence of his father and the cow very much startled the impecunious young man. This reads like a modern rendering of the impecunious Mr. Verdant Green's application to a maiden aunt for "a couple of ponies," which had a similar termination.

THE WORLD'S FAIR AT CHICAGO.—Among the exhibits at the "World's Fair" will be a microscope, made by a Munich firm at a cost of \$8,750. Electricity furnishes and regulates the source of light, which, placed in the focus of a parabolic aluminum reflector, reaches an intensity of 11,000 candle-power. There is an automatic mechanism, worked by electricity, for the centering of the quadruple condensers and illuminating the lenses, and there is also an arrangement for the exact control of the distance of the carbon point. The instrument is provided with an elaborate cooling machine, which is rendered necessary by the extreme heat generated by the illuminating arrangement. The magnifying power of the apparatus with ordinary objectives is about 11,000 diameters, but with the oil immersion this can be increased to 16,000. The State of Colorado is preparing an exhibit of its flora and fauna. Already more than 1,000 specimens of plants have been pressed; nearly 200 varieties of fruit have been duplicated in wax, and more than 2,000 specimens of insects (including, it may be presumed, the late unlamented Colorado beetle) have been mounted.

—*British Med. Jour.*

THE INFLUENCE OF WEATHER ON THE INTELLECT.—"Barometer rapidly falling. Heavy clouds in the southeast. My heart sank into gloomy forebodings. Read 'Manfred' and doubted whether I should live long. The leaden weight of destiny seemed to crush down my aching forehead, till the thunderstorm burst, and peace was restored to my troubled soul." The sun shines, you feel "an inexpressible joy bound through every vein, and the soft air breathed purity and self-sacrifice through your soul, you feel your heart expand towards the universe. Organs of veneration and benevolence pleasingly excited; and you give a shilling to a tramp."—Kingsley, in *Yeast*.

THE singular case of Dr. F. C. Fownes, who died Sunday night in New York city, from the effects of drinking distilled coffee, attracted considerable attention among the physicians yesterday. Dr. Fownes became a slave to the drink, it is said, and went through the same phases of degradation that tipplers usually follow. All his time and money were spent in perfecting methods for distilling coffee, which he imported himself for that purpose. No exactly similar case has come to the notice of local physicians so far as known. "It is analogous to the cases produced by the gratification of any depraved taste," said Dr. Clevenger. "It may be called coincident insanity, equivalent to the epileptic insanity which results from the use of cigarettes."—*Chicago News*.

THE Chief Justice of Trinidad has laid down the following propositions, as governing the physicians who are so unfortunate as to be under his jurisdiction:

1. That a medical man as such, and merely by becoming qualified, is bound to attend all cases to which he is summoned.
2. That no medical man has the right to abandon a case he has begun to treat without the consent of the patient, even where other professional aid is available and where the patient runs no risk from such abandonment; and that by so doing a medical man lays himself open to an action at law, civil or criminal.
3. That the making of contracts prior to attendance is an unprofessional and improper act on the part of the practitioner.

THE cork is a harmless quantity in contrast to the adulterated beverages which its withdrawal too frequently sets free to pour the germs of headache and other ills into the human system. The cork, however, that pops the liberation of genuine champagne—fruit of the vineyards of Epernay—releases to man that which both cheers and invigorates him. And when a cork pops from a bottle of Moigneaux Pere et Fils, you may know you are being wooed by the king of champagnes. It is absolutely free from deleterious infusions, is extremely dry and of the finest flavor, and can be indulged in with delight and benefit, and a guarantee that you won't be obliged to consult a hat-stretcher before going to business in the morning. This wine, long reserved to the uses and delectation of the nobility of Europe, has, through the influence of Lorenz Reich (who has secured the sole agency for the United States and Canada), been introduced into this country, and is fast becoming the favorite wine at prominent banquets and the popular brand with the leading clubs and hotels. To be obtained only of Lorenz Reich, The Cambridge, 334 Fifth avenue, New York.

DR. HENRY B. BAKER, ex-president of the American Public Health Association, has joined Dr. John Rauch in a movement to have the International Congress of Hygiene hold its next meeting in Chicago in 1893. The last congress was held in London this year. While there were several delegates present from the United States they were not authorized to invite the holding of the meeting in this country. It was voted that it should be held in Buda-Pesth in 1894. Mr. Baker thinks that the permanent committee could be induced to postpone the Buda Pesth meeting until 1895. The congress includes in its membership all the distinguished sanitarians of the age.

A NEW VIEW OF THE TEMPERANCE QUESTION.—When, says Ariel, the microbes and bacilli, who are ever on the watch to attack the human organism, enter the body of a teetotaler, they stay, and he indulges in a large and varied assortment of diseases. When they enter the body of the man who drinks, the taste and smell of the alcohol at once remind them that they are on licensed premises. They know their stay must be temporary, and that if they do not clear out by a certain time they will be “chucked.” Hence, their power of treating the drinker to disease is limited. If this argument does not convince the British public that teetotalism is a mistake, nothing will.

THE Mississippi Valley Medical Association held its Seventeenth Annual Session at St. Louis, October 14, 15 and 16, 1891, President Dr. C. H. Hughes, of St. Louis, in the chair. The attendance was large, the papers numerous and valuable. Dr. I. N. Love, the incomparable Chairman of the Committee of Arrangements, and his able assistants, deserve unstinted praise for their provision of receptions, rides, dinners, suppers, banquets, fine weather and full moon. Dr. C. A. L. Reed, of Cincinnati, was elected President; Dr. E. S. McKee, Cincinnati, re-elected Secretary; Dr. C. S. Bond, Richmond, Ind., First Vice-President; Dr. J. H. Stucky, Louisville, Second Vice-President; Dr. Joseph Ransohoff, Cincinnati, Chairman Committee of Arrangements. Place of meeting, Cincinnati, October, 1892.

HYPODERMIC MEDICATION.—In the *St. Joseph Medical Herald*, M. F. Weymann contributes a practical article on this subject. He points to a number of faulty practices in the use of this instrument, all which are avoided by the method he employs. He introduces the pellet into the barrel of the syringe, and draws in the requisite water. This prevents septic contamination as nearly as is possible in ordinary practice. The syringe made by Parke, Davis & Co. is the only one made that allows of this method. The leather is kept in good order by applying carbolized petrolatum. He performed on himself a curious experiment. He boiled the muddy Missouri water, and injected it, mud and all, into his arm. He narrowly escaped an abscess, and experienced a pruritus for which he “scratched for many days.”

THE *Chicago Daily News* says that the Waukesha people who contemplate piping water to Chicago are fighting the efforts to drain the Chicago river away from the lake and render the lake-water pure. Meanwhile Waukesha appears to be having trouble enough in her own limits; the State Board of Health having condemned a boys' school in that town as in a dangerous condition from sewer gas. Out of 240 boys in the institution,

over 70 are on the sick list, with sore throats of various grades. One died on October 5 of malignant diphtheria, that now prevails in Waukesha. Unless Waukesha has put in operation an efficient system of drainage, its waters are unfit for use; the published analyses showing an amount of organic matter too large for safety.

APROPOS of Dr. Beecher's paper upon Southern California, the following extract from the *Occidental Medical Times* may not be devoid of interest: The deaths registered in 67 town districts of California during August, 1891, in a population of 709,554, correspond to an annual rate of 14.79 per thousand, the total mortality having been 975. Of these, 155 were from zymotic diseases, 25 of them being due to diphtheria, 33 to typhoid fever, 48 to cholera infantum, 19 to diarrhoea and dysentery, 5 to cerebro-spinal fever, 2 to scarlatina, and 5 to whooping-cough. Diseases of the respiratory organs furnished 208 deaths, of which consumption caused 122; pneumonia, 52; bronchitis, 19, and pulmonary congestion, 15. Heart disease killed 82. The highest mortality was reported from Los Angeles; the lowest from Santa Anna.

A DEVICE has recently been invented for promoting deep breathing. It consists of a small belt that encircles the chest at the point of its greatest expansion, and a take-up mechanism to which the ends of the belt are attached. The take-up mechanism consists of a coiled spring, adapted to tighten the belt at intervals, and a train of wheels, by which the speed of the spring in taking up the belt may be regulated. Upon the exhalation of the breath after the full expansion of the lungs, the chest returns to its natural size in ordinary breathing, thus leaving the belt loose. Immediately the take-up mechanism begins to gather in the slack of the belt, tightening it until its pressure is uncomfortable, compelling another inspiration, thus lengthening the belt. This lengthening is accomplished by the withdrawal of the strap from the case, which act again coils the spring. It is claimed that the device induces full breaths at regular intervals, thus naturally enlarging the lungs and chest.

MR. ERNEST HART, editor of the *British Medical Journal*, when his health was drunk at the Association dinner at Worcester, said, in reply, that, instead of making a speech, he would read some lines which had been sent him by an anonymous friend. They were as follows:

Can he leave all his wrongs to the future, and carry his heart in his cheek?
Can he do an hour's work in a minute, and live on a sixpence a week?
Can he courteously talk to an equal, and browbeat an impudent dunce?
Can he keep things in apple-pie order, and do half-a-dozen at once?
Can he press all the springs of knowledge with quick and reliable touch,
And be sure that he knows how much to know, and knows how to not know too much?
Does he know how to spur up his virtue, and put a check-rein on his pride?
Can he carry a gentleman's manners within a rhinoceros' hide?
Can he know all, and do all, and be all, with cheerfulness, courage, and vim?
If so, we perhaps can be makin' an editor “outer of him!”
And 'tis thus with our noble profession, and thus it will ever be; still
There are some who appreciate its labors, and some who perhaps never will.

—*Pharm. Jour. of Australasia.*

Aluminium has been employed in England for pocket cases. Where is the genius who is going to make an artificial leg of this metal?

SWITZERLAND has decided to erect a large, free hospital for consumptives in the Alps, to commemorate the sexcentenary of the Swiss Federation.

ILLINGWORTH pushes his method of treating scarlatina and diphtheria, by biniodide of mercury, with unusual persistency. As is generally the case, the one who introduced the remedy appears to have better success with it than any one else.

GEORGE R. MURRAY reports decided improvement in a case of myxœdema resulting from hypodermic injections of an extract from the thyroid gland of a sheep.

E. Henry Fenwick (*Brit. Med. Jour.*) reports that injections of thyroid juice greatly increase the excretion of urine, in kidney disease, but not in healthy persons. From his observations he inclines to the belief that myxœdema depends on perverted renal functions rather than upon the thyroid disease.

LIFE at the Lying-in Hospital is one long drawn sigh of ineffable bliss to the nurses. One of their number took her temporary banishment from this earthly paradise so hard that she set fire to the residence of her employer three times within two days, in order to secure her speedy return to the hospital. For this noble testimonial to the institution an unsympathetic magistrate has held her for trial.

Far different is it with another institution across the river. Three of the nurses sought to recuperate their exhausted forces by a trip to the classic precincts of Gloucester. The balmy breezes of the river failing to relieve their melancholy, they resorted to spirituous comforts, with a result that secured their dismissal from the institution next morning.

THE resignation of Dr. Henry Leffmann, Physician of the Port of Philadelphia, which was sent to Governor Pattison on Tuesday, is said by his friends to have been tendered solely because of the fact that his large private practice was greatly interfered with by the duties of his office. It was also stated that Dr. Leffmann's position as Professor of Chemistry at the Women's Medical College and Pennsylvania College of Dental Surgery took up so much of his time that he could not give the attention to his official work that it requires.

The resignation is to take effect as soon as the Governor names his successor. Dr. Leffmann refuses to discuss his action beyond saying that his private business needs his time.

On dit, that inability to harmonize with the Board of Health had something to do with the matter.

JEWISH PATHOLOGICAL PROCLIVITIES.—A curious discussion, well worthy of the silly season, has been going on at the French Academy of Medicine, in reference to the alleged proclivity of Jews to certain classes of diseases. It is asserted, on the one hand, that Jews are more liable than Gentiles to epilepsy and mental aberration. It does not appear, however, that the proportion of Hebrews in the French epileptic institutions and lunatic asylums is greater than is accounted for by their numbers in respect of the total population. In regard to diabetes, however, there does seem to be an excess of Jewish patients. This fact (if fact it be), is explained by M. German Sée on the hypothesis that diabetes is a malady very gen-

erally dependent upon want of physical exercise, and he says that Jews, like most Oriental people, prefer the *dolce far niente*, or the nearest approach to it, to occupations requiring activity. One point is pretty certain, and that is the comparative immunity of Jews from *tænia*, an exemption attributed to the more than sparing use they make of pork as an article of food. We gather that the Jews also suffer less than other people from (curious medley!) lightning stroke and plague, goitre and croup, and even if suffering from diabetes, they are less exposed to the complications which menace Christian glycosurics. On the whole, no data of value were forthcoming, and the discussion only afforded an opportunity to one or two sharp Hebrews to show that they can handle satire and sarcasm as defensive weapons as well as any Christian.—*Hosp. Gazette*.

DR. SAMUEL S. WALLIAN is organizing an invalid excursion to Southern California, to start late in October or early in November, stopping at Colorado Springs and Manitou for a few days' rest, if a majority so desire. The plan includes a lady attendant, special nurses as required, and every form of restorative now at command, including plenty of pure and fresh oxygen, with which to prevent and overcome dyspnoea, cardiac weakness, and the dangerous degree of fatigue and depression usually suffered by invalids en route.

This will enable many to safely venture the journey who could not think of undertaking so long a trip except under immediate professional care.

The cases receiving most marked benefit from a sojourn in the equable and restful climate of Southern California include all forms of respiratory diseases, chronic rheumatism, neurasthenia and nervous diseases, and the chronic indigestions.

THE I. V. Williamson Free School of Mechanical Trades, at Williamson, near Elwyn, on the Central Division of the Philadelphia, Wilmington and Baltimore Railroad, opened October 20 for the reception of the seventy-two boys who successfully passed the entrance examination last June. They are to remain there three years, except in case of gross misconduct, as all have been indentured to the Board of Trustees, in accordance with the wishes of the dead philanthropist, an old-time merchant, with a fondness for old-time customs, and especially for the old-fashioned system of apprenticeship.

The complete staff of instructors comprises President, John M. Shrigley; Superintendent, Lieut. Robert Crawford; Instructor of Drawing and Penmanship, H. S. Bitting; Instructor of Woodwork, J. Frank Grant; Instructor of School, Miss Abigail E. Eyre; Matrons, Miss Ritchie, Miss Cassin and Mrs. Dalton; Steward, Miss Emma Sturr; and Engineer, Alonzo Dalton.

THE patent medicine men have stirred up a doughty antagonist in Mr. Frederick Stearns, who proceeds to express himself concerning them in the following vigorous style:

"For many years the patent medicine business has steadily encroached on the natural and legitimate province of the retail druggist, viz.: the compounding of medicines, and have sought to take to themselves the whole of the trade. In effect this has been to substitute a degrading and non-professional business of small and unimportant profit for a legitimate, honorable and profitable calling. Their nefarious business has robbed him of his perquisites as apothecary and medical adviser in simple ailments not re-

quiring the advice of the physician. In doing this it has done the retail drug trade a positive injury. Further, the introduction of patent medicines made it possible for cheap men, and above all, men without the first semblance of professional training or capacity, to engage in the business of their sale."

—*The New Idea.*

WEEKLY Report of Interments in Philadelphia, from October 10 to October 17, 1891:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess.....	1	1	Hemorrhage.....	3	
Abortion.....		1	Hernia.....	1	
Anæmia.....	2		Homicide.....	1	
Apoplexy.....	10		Inanition.....		6
Asthma.....	1		Inflammation brain.....	1	4
Aneurism of the aorta.....	2		" " bronchi.....	1	1
Bright's disease.....	4		" " kidneys.....	4	1
Burns and scalds.....	1		" " larynx.....		3
Cancer.....	17		" " lungs.....	7	6
Casualties.....	5	2	" " pericardium.....	1	1
Congestion of the brain.....	4	4	" " peritoneum.....	1	3
" " lungs.....	3	4	" " pleura.....	1	1
Collapse of lungs.....		1	" " s. & bowels.....	4	3
Cholera infantum.....		15	Intussusception.....	1	
Cirrhosis of the liver.....	1		Jaundice.....		3
Consumption of the lungs.....	52	9	Malformation.....		1
Convulsions.....		15	Marasmus.....		21
Croup.....		16	Neuralgia of the heart.....	2	
Cyanosis.....		5	Obstruction of the bowels.....	1	
Debility.....	3	1	Old age.....	14	
Diabetes.....	1		Paralysis.....	2	1
Diarrhœa.....	1	3	Rheumatism.....	1	1
Diphtheria.....	1	45	Shock, surgical.....	2	1
Disease of the heart.....	16	1	Scrofula.....		1
Drowned.....	1	1	Septicæmia.....	3	
Dropsy.....	1	1	Sore mouth.....		1
Dysentery.....	1	2	Softening of the brain.....	3	
Effusion of the brain.....		1	Suffocation.....		2
Erysipelas.....	1		Tetanus.....	1	1
Embolism, cerebral.....	1		Tumor.....		2
Fatty degeneration of the heart.....	1		Uræmia.....	3	6
Fever, scarlet.....		7	Whooping cough.....		2
" " typhoid.....		5	Total.....	195	203
Gangrene.....	1	3			

INCOMPATIBLES OF ANTIKAMNIA.—The following substances produce precipitates when added to solutions of antikamnia:

Carbolic acid in saturated solution.
Tannin.
Mercuric chloride.
Infusion catechu.
Infusion cinchona bark.
Infusion rose leaves.
Infusion uva ursi.
Solution extract cinchona bark.
Tincture catechu.
Tincture cinchona.
Tincture hamamelis.
Tincture iodine.
Tincture kino.
Tincture rhubarb.

The following substances produce coloration when added to solutions of antikamnia:

Hydrocyanic acid, dilute solution, yellow.
Nitric acid, dilute solution, weak yellow.
Ammonia alum, dilute solution, dark yellow.
Amyl nitrite, acid solution, green.
Nitrous ether, alcoholic solution, green.
Copper sulphate, green.
Ferrous sulphate, yellow-brown.
Ferric sulphate, blood-red.
Ferric chloride, blood-red.
Syrup iodide iron, red-brown.

—*Notes on New Pharmaceutical Products.*

MR. HENRY C. BURDETTE, Secretary of the London Stock Exchange, is now in Philadelphia, urging the project of establishing a National Nurses' Pension

Fund. Mr. Burdette is the founder of the Royal National Pension Fund for Nurses; the object of his present visit to America being the proposed establishment of a similar fund here.

Mr. Burdette states that several Americans in London are interested in its establishment. The fund, if established here in America, will be entirely separate from the English fund; but will be similarly organized. It is proposed to incorporate it with a capital of \$100,000, to be raised by popular subscription. Mr. Burdette states that two men in New York will furnish the money, if necessary. The idea is to afford nurses the means of investing their savings, at the same time securing sick benefits and a pension when old or permanently disabled. These advantages, he said, cannot be found in any existing American institution, and it is essential that a fund should be established which shall meet the special requirements of all members of the profession, whether hospital or private nurses. The calculations, already made by a New York insurance firm, show that, in return for a monthly payment of \$3.50 by a member, the fund could afford to pay a sick benefit of \$5 a week to all members under sixty years of age, and an annual pension of \$150 to members over sixty. English experience shows that nurses almost invariably are permanently disabled and on sick benefits at fifty-four, so that the pension practically commences before the age of sixty. As the fund is to be a saving fund, a member may put her earnings into it as rapidly as she pleases, an annuity being granted when the amount reaches \$50. In case of death, the amount already deposited in the fund will be turned over, with compound interest at 2½ per cent., to any executor previously designated.

It is proposed that the fund shall be governed by a National Council, made up of one financial representative each from Philadelphia, New York, Boston, Baltimore and Chicago, and representatives of each of the nurses' training schools in the United States, the latter being elected by the members themselves. Mr. J. Pierpont Morgan, of New York, has agreed to accept the presidency and attend the regular monthly meetings of the Council.

THE long-continued spell of warm weather—Summer lingering in the lap of Autumn—has at last broken; and chilly rooms, lowering skies, and the noticeable hurry in the footsteps of passers-by, warn us that the season has changed. So many fail to realize this, until it is forced upon them; and consequently the doctor has a rush of patients, with colds, coughs, neuralgias, lung-ails, aches, and pains innumerable. It would be a curious calculation that would show what is the actual cost to a city like this, of the neglect to put on woollen underwear and stockings at the proper time. It would certainly amount to enough to provide the whole population with the best of woollens. The preference of those who have studied this question is unanimously in favor of all wool, instead of mixed goods. To this there is one notable exception, or rather an apparent objection, in the case of the Jaros fabric. This is composed of a woollen felting firmly united to a cotton backing. We emphasize the word, *firmly*, because when we first examined these goods we were under the impression that the woollen felting would soon wear off, leaving the cotton next to the skin. This, however, was a mistake, as we have assured ourselves after a personal trial of the goods. The advantages of this fabric are peculiar. The cotton backing completely prevents shrinking; and gives strength to the garments.

The wool alone touches the body ; and is softer and more comfortable than any woven fabric. But the greatest advantage of this Jaros stuff is its curious action towards moisture. Dip a piece into water, and in a few moments the wool is dry, while the water is dripping off the cotton backing. Thus, after an accidental wetting, the water is conducted away from the wearer's body, which remains warm and dry, while the water is shed off from the outside. Thus, the advantages of a change to dry clothing are realized at once, without trouble or delay. This gives the Jaros wear an advantage over all others ; one which our readers can easily appreciate by giving it a trial.

THE venerable Dr. Traill Green, of Easton, Pa., who was one of the first Trustees and the first Instructor of Chemistry at Lafayette College, and who has been connected with that institution for more than half a century, has resigned as Dean of the Pardee Scientific Department and been made Professor Emeritus of the General Chemical Department. Dr. Green has been the acting President since President Knox resigned. He continues his warm interest in the college, but gives up active work.

THE AMNIOTIC FLUID IN TUBERCULOSIS.—A woman, aged thirty, suffering from pulmonary tuberculosis, recently committed suicide by hanging, in the Maternity Hospital at Nancy, in the sixth month of her fifth pregnancy. M. Haushalter, at the request of Professor Herrgott, inoculated guinea-pigs with the amniotic fluid, a portion of the placenta, and a portion of the foetal liver. The animals inoculated with placenta and liver died in a few hours. The third guinea-pig, which had been inoculated in the peritoneal cavity with 3 cubic centimeters of amniotic fluid, survived, and was kept isolated in a clean and well ventilated cage. It was killed seventy-four days after the inoculation, when the abdominal and thoracic glands were found to be tuberculous, and there was recent acute miliary tuberculosis of the lungs ; numerous bacilli were found. As the amniotic sac at the time of death was unruptured, and as every precaution was taken to obtain the fluid in an uncontaminated condition, Professor Herrgott maintains that the experiment proves that the amniotic fluid in a tuberculous woman may contain the virus of tuberculosis. The lungs in this case were adherent, and the seat of acute disseminated tuberculosis.—*Brit. Med. Jour.*

TREATMENT OF TROPICAL DYSENTERY.—In the *Indian Medical Gazette*, Walsh gives the results of several methods of treatment employed in the severe form of dysentery prevalent in India.

Emetin was combined with Mayer's reagent, forming $C_{20}H_3N_2O_3$, H_5I_2 . It was thought that as the emetin thus combined remained inactive in the presence of acids, it would not produce vomiting ; and this appears to be corroborated by experience.

Mercuric iodide is a powerful antiseptic. Of the compound, $\frac{1}{2}$ grain was administered, in sugar powder, every four hours. Of 22 cases 1 died, 1 was discharged unimproved, and the rest recovered ; the average duration of dysenteric symptoms being 4.9 days.

In 10 cases treated by the bark and seeds of the *holarrhena antidysenterica*, all recovered ; the average duration being 5.7 days.

Of 151 cases treated with aconite, with strict rice-and-milk diet, all but 1 recovered ; the average duration being 4.05 days.

Leahy treated 95 cases with sulphate of magnesia and sulphuric acid, with three deaths ; average duration, 2 days.

The author concludes by advocating cleanliness, as produced by a laxative ; rest, by a fluid diet and the recumbent posture, and a simple antiseptic or astringent. Injections are only useful when the lesions are low down. In extreme hemorrhage, ergot with hazeline (hemamelis), and astringent injections, give the best results.

NEBRASKA'S PHYSICIANS.—The Secretaries of the Nebraska State Board of Health have written to Attorney-General Hastings, asking what constitutes unprofessional or dishonorable conduct, such as would authorize the Board of Secretaries to refuse to issue a certificate to a person applying therefor. The Attorney-General in his reply says :

Section 14 of chapter 35 of the session laws of 1891, page 285, provides as follows: "The Board may refuse certificates to persons guilty of unprofessional or dishonorable conduct, and it may revoke certificates for like cause. Provided, always, that it has given the person an opportunity to be heard in his or her defense."

What is unprofessional or dishonorable conduct on the part of a practitioner of medicine is a question in which the courts appear to be wide apart. The section above quoted is a copy of the Illinois and Minnesota law upon the same subject. The code of ethics as laid down by medical associations furnishes us but little guidance concerning this question. It must not be said that a society of persons who have been educated in the medical profession can adopt a code of ethics, and that he who violates any article of that code is guilty of unprofessional conduct, and consequently shall be refused a certificate by your Board. The object and aim of the law under consideration, as I take it, is, among other things, to secure a higher standard in the medical profession, and to exclude empirics and empiricism from the profession.

To reduce to inflexible and invariable rules what is, or what is not, unprofessional or dishonorable conduct within the meaning and intent of the act of 1891 would be a task of gigantic proportions. "Unprofessional" is defined by Webster as "not according to the rules or proprieties of a profession."

It might, therefore, be said that the unprofessional conduct which would authorize the Board to refuse to grant a certificate to a physician, or, in the event one has been issued, to revoke it, is such conduct as is inconsistent with the honorable practice of the profession.

In case of the State ex rel Powell vs. The State Medical Examining Board, decided at the July term, 1884, by the Supreme Court of the State of Minnesota, the court, in giving its construction to a section of the statute identical with section 14 of our own statute, took occasion to remark :

"We will add as our construction of the words 'unprofessional or dishonorable conduct,' as used in section 9, that we do not think that the legislature contemplated matters of merely professional ethics, but that the term 'unprofessional' was used convertibly with 'dishonorable.' The meaning may be expressed by using the conjunctive 'and' in place of the disjunctive 'or.'"

To a greater or less degree each case of unprofessional or dishonorable conduct must be addressed to the sound judgment of the Board. No two cases will be quite similar in character. I, therefore, conclude that the legislature meant by unprofessional or dishonorable conduct such conduct as was dishonorable and calculated to mislead or deceive. Such practice, in short, as should not be indulged in by honorable men of any profession or calling.

THE definition of a blush, as given by Dr. T. C. Minor, may be of use to Dr. H. Campbell when he brings out the next edition of his *magnum opus* "On Blushing." Dr. Minor defines a blush as a "temporary erythema and calorific effulgence of the physiognomy, ætiologized by the perceptiveness of the censorium when in a predicament of unequilibrium from a sense of shame, anger, or other cause, eventuating in a paresis of the vasomotor capillaries, whereby, being divested of their elasticity, they are suffused with radiant, aerated, compound nutritive circulating liquid, emanating from an intimidated præcordia."—*Hosp. Gazette*.

KIND WORDS FOR THE DOCTOR.—The Rev. Dr. H. A. Delano delivered a sermon on "Physicians" recently in the First Baptist Church at Evanston.

"The annals of history," he said, "are pregnant with the deeds of unwearied inventors, intrepid investigators, unselfish heroism and noble martyrdom of life given for others. The history of medicine is the history of great men, great talents, marvelous industry, careful investigation, startling discovery and tremendous sacrifice. How many, how illustrious and how worthy the names that shine in the annals of medicine, surgery and this great study of humanity! These men have been pioneers in the untried realms of disease. They have met with facts as stern as fate and as stubborn as death. If anybody is ever excused because of skepticism I think it will be the physician. He has seen a thousand theories of science shivered to atoms. Taught by theology the mercy of God, he has lived in realms of stygian darkness, fever and chill. He has moved through hospitals of pain and suffering supreme; witnessed the horrors of an inferno upon battlefields of blood; invaded alleys rank with filth and tenement houses malodorous and sickening; seen humanity swarm and struggle, spawn and die; beheld the birth of monstrosities appalling; seen the iron-handed, inevitable, relentless trend of heredity; witnessed the murderous tyranny of fashion, that chokes life to death ere life is born; heard the secrets of the chamber; and yet men wonder that he is often a materialist, a doubter of humanity and a relentless foe of religious shams, follies and crimes.

"There are, however, great exceptions. The Christian physician is often found reverent before the awful mysteries of the unseen, humble before the mighty facts revealed; tracing the infinite mind in all the wonders of the strange mechanism of these bodies. When theology has a larger basis of reason and good sense in it; when the doctor shall find the preacher sometimes attributing the death of a child to green apples rather than providence; when clergymen admit the possibility of error in creed as well as in science; when we shall persuade men that the best care for the life to come is the care of the life that now is; when we shall have taught people that disobedience to the laws of nature is a crime against the law of God, then I know there shall be fewer skeptics among our earnest and learned physicians."—*Chicago Daily News*.

UNIVERSITIES OF THE WORLD.—Norway has 1 university, 46 professors, and 880 students.

France has 1 university, 180 professors, and 9,300 students.

Belgium has 4 universities, 88 professors, and 2,400 students.

Holland has 4 universities, 80 professors, and 1,600 students.

Sweden has 2 universities, 173 professors, and 2,010 students.

Russia has 8 universities, 582 professors, and 6,900 students.

The United States of America has 360 universities, 4,240 professors, and 60,400 students.

Portugal has 1 university, 40 professors, and 1,300 students.

Denmark has 1 university, 40 professors, and 1,400 students.

Spain has 10 universities, 380 professors, and 16,200 students.

Italy has 17 universities, 600 professors, and 11,140 students.

Switzerland has 3 universities, 60 professors, and 2,000 students.

Germany has 21 universities, 1,020 professors, and 25,094 students.

Great Britain has 11 universities, 834 professors, and 13,430 students.

Austria has 10 universities, 1,810 professors, and 13,600 students.

THE BRITISH STUDENT'S COURSE IN MEDICINE.—*First Winter Session*: Elementary Anatomy, Dissections, Physiology, Chemistry.

First Summer Session: Materia Medica, Botany, Practical Chemistry, Practical Physiology.

Second Winter Session: Anatomy, Dissections, Physiology.

Second Summer Session: Midwifery, Comparative Anatomy, Practical Surgery, Practical Medicine. Clinical Medicine and Surgery may also be attended during this Session.

Third Winter Session: Practical Medicine and Surgery, Clinical Medicine and Surgery.

Third Summer Session: Forensic Medicine, Practical Pathology, Hygiene, and Sanitary Science, Clinical Medicine and Surgery.

Fourth Winter Session: Clinical Medicine and Surgery. In some hospitals special classes are held during the Session for the study of Aural Surgery, Ophthalmic Surgery, Obstetric Demonstrations, etc.

After entering a medical school no time should be lost, for the student will find that he has none too much time in which to prepare himself for his examinations. The study of the bones should be commenced at once, and as soon as possible he should proceed with actual dissection, commencing with an arm or a leg. As much time as possible should be spent in the dissecting-room at first, without neglecting other demonstrations and lectures. In the months of February and March he should attend the class in elementary histology, in which he will become familiar with the use of the microscope. Chemical lectures may also be attended in the first half of the Winter Session.

During the Summer Session he should study chemistry, and practical chemistry, and experimental physics; should pass the examination in chemistry, and thus complete the first examination of the Conjoint Board, postponing materia medica till his second Summer Session.

In his second winter the student will complete his study of anatomy and physiology by attendance on lectures on anatomy and physiology, on the classes in histology and practical physiology, and by dissection; he will thus qualify himself for the second examination in anatomy and physiology, for which he will become eligible at this period of his studies.

In his second Summer Session lectures on materia medica, and classes on practical pharmacy (if it has not been previously taken), should be attended, so that the student may pass in the succeeding July the examination in materia medica and pharmacy, thus completing the second examination of the Conjoint Board.

In the case of a student entering in May, he should attend lectures on chemistry, experimental physics, and the classes in practical chemistry, and pass the chemistry of the first conjoint examination in the July following.

In the third and fourth years the student should pay close attention to lectures on medicine, surgery, midwifery, medical jurisprudence, and pathology, classes in practical surgery, morbid histology, and the demonstrations in the pathological theatre.

The appointments in the out-patient departments and in the wards should be undertaken when the first and second conjoint examinations have been passed; but it is rarely advisable to attempt any of them before, as it is obvious that much of the advantage of the appointment is lost if the student is unable to supplement the time actually spent over the particular duties by reading and preparation at other times. The duties of surgical clinical clerk should be first undertaken, and the wards, out-patient department, post-mortem room and clinical lectures constantly attended.

Having got through this part of his work, the student will then be qualified for the medical and surgical appointments, which he is required by the examining bodies to fulfil before presenting himself for their diplomas; and they should, if possible, be taken in the following order: Assistant-surgeon's dresser, medical clinical clerk, surgeon's dresser.

In the first-named appointment the student should practise the manipulations of minor surgery, and at this period, if not previously, he should attend the course of elementary practical surgery, in order to qualify for the post of assistant-surgeon's dresser. In the appointment of medical clinical clerk, with which is combined a course of practical medicine, the elements of physical diagnosis should be learnt, every effort being made to train the eye, the hand, and the ear, as well as to learn the use of the various instruments of investigation. The knowledge before acquired of microscopical and of chemical manipulation will now be fully applied; and the subject of morbid anatomy should be studied at the same time. The appointments of assistant-physician's clerk, and obstetric out-patient clerk, should follow, and those of post-mortem clerk, dental surgeon's dresser, etc., may also be held advantageously during the third or four year. Cases of midwifery should not be attended until after a course of lectures on that subject, when the student should make it convenient to devote a month to the appointment of extern obstetric attendant.

When the appointment of medical clinical clerk is completed, the time will be nearly at hand when the student is permitted by the regulations to present himself for one or more of the subjects of the final examinations; and if he is not desirous of taking the whole of the subjects together, it will probably be convenient to be examined in medicine first, as he can thereby directly utilize the whole of the work he has been doing in the six months' medical clinical clerkship. The surgical portion of the diploma can then be taken a few months later, midwifery being added to whichever may be most convenient.

In the case of university graduates some modifications of the above course are necessary. By the regulations of the London University no lectures on anatomy, dissections, etc., and no time spent at a medical school, are recognized for the purposes of the degree examinations until the preliminary scientific examination has been passed. Consequently the student must devote his whole time to the preliminary scientific examination, before commencing the subjects above mentioned; at any rate he will have to dissect two winters between the preliminary scientific and the intermediate M.B. examinations. The student who intends to graduate at the London University is advised to take the special classes for the preliminary scientific examinations, which are held in all the larger medical schools, and to defer his entry as a "First Year's Student" until this examination has been passed—this suggestion is very important, as its neglect may give rise to difficulties later on in the course. Students taking this course are allowed to compete afterwards for the entrance scholarships, and for annual prizes and other scholarships, as if their work for the preliminary scientific examination were entirely independent. The preliminary scientific and intermediate M.B. examinations are accepted by the Colleges of Physicians and Surgeons, as together covering the work of their first and second examinations, so that one who has passed the preliminary scientific examination may devote his whole time to the intermediate M.B. examination, which occurs two years after his entrance in October.

—*Hospital Gazette.*

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending October 17, 1891.

MAGRUDER, A. F., Surgeon. Ordered to the "Boston."

DIXON, W. S., Surgeon. Detached from the "Boston," and granted leave for two months.

MARSTELLER, E. H., Passed Assistant-Surgeon. Ordered to special duty Baltimore, Md.

DRAKE, N. H., Passed Assistant-Surgeon. Detached from "Albatross," and granted leave for two months.

WIEBER, F. W. F., Passed Assistant-Surgeon. Detached from the "Pensacola," and ordered to the "Albatross."

BRADLEY, GEORGE P., Surgeon. Detached from Naval Hospital, Chelsea, Mass., and ordered to the Receiving Ship "Wabash."

BRAITHWAIT, F. G., Assistant-Surgeon. Detached from "Wabash," and ordered to Naval Hospital, Chelsea, Mass.

BEYER, H. G., Passed Assistant-Surgeon. Ordered to Naval Academy, Annapolis, Md.

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The Times and Register.

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Clinical Lecture.

CHRONIC RHEUMATISM.

By JAMES M. ANDERS, M.D.,

Professor of Theory and Practice of Medicine, Clinical Medicine and Hygiene at the Medico-Chirurgical College of Philadelphia.

GENTLEMEN:—I want to show you to-day this young girl, aged sixteen years, with a negative family history, who ten years ago had an attack of rheumatism when she also had an inflammation of the eye, which brought on a cataract. Since then she was free from rheumatism until after she moved from the country to Philadelphia, about one year ago. Not long after removing to Philadelphia, she began again with rheumatism, which was first felt only in the smaller joints of both hands and both feet, all the joints being affected almost simultaneously. At first the joints were tender to the touch, painful more especially at night, somewhat swollen, and, perhaps, very little reddened. There was little or no fever present, and I may have stated that is one of the distinguishing characteristics of chronic rheumatism, which frequently follows acute rheumatism, though sometimes years later. Now she also tells us that during the last eleven months she has had exacerbations several times, with the symptoms named, and at other times was comparatively free from them. That is also very characteristic of the course of chronic rheumatism. The disease is very much influenced by weather changes and by locality of residence. She lives, she thinks, in a comparatively dry home; but the fact that she began with rheumatic symptoms as soon as she removed to Philadelphia, and had not had rheumatism for ten years prior, goes to show that, after all, the house to which she removed may not have been so dry as it should have been, and, hence, may have caused rheumatism. For we do know that damp residences are frequently the cause of chronic

rheumatism, as well as a leading factor in the causation of acute rheumatism.

It is a very important matter to decide as to whether you have a case of chronic rheumatism or a case of gout to deal with, and, then again, it is important to distinguished chronic rheumatism from so-called rheumatoid arthritis, which is not rheumatism at all, though an affection of the joints.

Rheumatoid arthritis is apt to occur later in life, and is a steadily progressive condition, one joint after another becoming implicated, without any decided subsidence in the local symptoms of a joint once affected. Cases of rheumatoid arthritis also result, by and by, in ankylosis of the joint, and there is greater deformity than we see here. The ends of the bones become enlarged and very much thickened, while the soft structures near the joint waste very much in rheumatoid arthritis; hence, the well-marked deformity that is almost universally present. Later, there is ossification of the soft structures around the joint, with complete ankylosis, and it is by this condition that you will often be obliged to distinguish between cases of rheumatoid arthritis and cases of chronic rheumatism. Partial ankylosis rarely occurs in far advanced cases of chronic rheumatism; they do have impairment of motion. You may find only limited motion in the joint; decided stiffness, with persistent enlargement; but you never have in chronic rheumatism, however far advanced, complete ankylosis.

You have now to distinguish from chronic gout, not always an easy matter. Gout is markedly hereditary; rheumatism is also hereditary, but not quite to the same degree. In rheumatism, you will generally have a history of exposure in a damp residence, as in this girl's case, or exposure out of doors to wet and cold. Not so in cases of gout. You, however, often get a marked history of over-feeding prior to an attack of gout. The attack of gout comes on at night, and, as a rule, affects the toes and smaller

joints. No such history was obtained from this patient. These paroxysms last a much shorter time than an attack of rheumatism, either acute or chronic; you have, in gout, deformity and stiffness on account of the deposits of urates in the joints. In gout, you have the urine much more implicated than in chronic rheumatism, and so also is the blood. If you are in doubt as to whether a case is one of gout or chronic rheumatism, examine the blood under a microscope for uric acid crystals; if you find these, you may be sure you have gout to deal with. This never occurs in cases of typical rheumatism, but does usually occur in gout. Uric acid crystals in the urine are pathognomonic of gout.

Much more might be said as to these diseases; I have given you only the leading points in the differentiation. The history is of course different in different instances. The history of this patient's case also points clearly to rheumatism. Since this girl came here in June she has improved. Her treatment has been the administration of four lemons daily, a teaspoonful of Rochelle salts once a day, and a tonic mixture consisting chiefly of tincture of calumba, before each meal. In cases of rheumatism, we attempt to maintain an alkaline condition of the blood, and we know, as physiologists, that the vegetable acids are the natural means for maintaining this alkalinity, so that the administration of lemon juice is a perfectly rational method of treatment. Besides this, we find that the so-called anti-rheumatic treatment in cases of chronic rheumatism, has really very little beneficial effect; far better is it to improve the nutrition of the patient; far better is it to give tonics, more particularly, the bitter tonic. Additionally we may administer cod-liver oil. I think there is no better remedy in chronic rheumatism than cod-liver oil given continuously, provided that the digestive organs will tolerate it. When anæmia is present, we administer iron; a little iron would do this girl no harm, as she has some of the evidences of anæmia, viz.: pallor of the skin and mucous membranes; but since she has improved under the present plan of treatment, we will continue it until Professor Woodbury, whose patient she is, returns.

Original Articles.

OBSTRUCTION OF THE BOWEL.¹

By M. PRICE, M.D.

THE treatment of obstruction of the bowel is one of the greatest importance to the public as well as the profession. There is no subject or condition where life so positively depends upon a proper appreciation of the conditions and immediate and correctly applied surgical treatment.

There is no condition where the complications are so varied, from simple hernia to virulent malignancy; there are so many conditions that will produce obstruction, that the wonder is that any of us get through life with a complete and healthy bowel in our body.

The causes of obstruction are almost innumerable, and every case is one to be dealt with in a manner peculiar to itself. The life of the patient depends upon the ability of the operator to cope with the complications, more than any other factor.

To appreciate the difficulties to be overcome in this department of abdominal surgery, one has but to ex-

amine the work of Senn and a host of others who have done work in the abdomen, and ask any one of them what part, if any, is easy of accomplishment.

In most cases of obstruction of the bowel there is no indication or symptom to indicate or direct us to the point of obstruction.

We have a patient with an enormously distended abdomen with symptoms of peritonitis, with fecal vomiting, with pulse and temperature to indicate a condition of things for most urgent and prompt action. Or we may have an obstruction with scarce one of these symptoms to direct us in our investigation. Help can only come to a patient suffering thus from one who can correctly read the symptoms and correctly interpret their magnitude. Abdominal surgery for many years offered hope of relief to a very small number of abdominal diseases, but now surgery has thrown open the door to all who suffer with abdominal disease with the same opportunity for relief that the surgeons offered only a short time ago for ovarian tumors, with a vastly improved method and a greatly reduced death-rate.

In obstruction of the bowel there are so many questions and conditions to be considered before operation, that when the time comes to operate, it is very much like a well-planned battlefield with every division in position and all the minor details settled; the work of battle begins, and the surgeon only waits the development of the enemy or disease with which he has to contend in the completion of his work in the removal of the conditions present.

The first question to be decided is: Is there a strangulation present, or an obstruction, or a condition of partial paralysis induced by over-distension, by a costive habit, or a condition produced from loss of proper nerve force for the performance of bowel digestion and elimination, or is it a paralysis following convulsion with general paralysis of the entire body? All these questions have to be answered some time in the experience of every operator, not all in the same case, but they all have a place in the consideration of the question in hand, and the operator who does not keep his mind impressed with such possibilities, will sooner or later have cause to regret.

There is no better place than just here to relate a case in point. Dr. Ewing, of West Grove, asked me to see a patient with symptoms of obstruction of the bowel, in a woman sixty-five years old, who had been suffering for five days from great distention, the bowel showing through the abdominal wall very much like a mass of sausage under a linen cloth, an increased pulse and a temperature something above the normal, but not enough to indicate a serious condition. The other symptoms indicated an element in her condition that led me to investigate further for a cause. The doctor had used all the agents, purgative and otherwise, without effect; the stomach now refused all drugs. The daughter stated that the patient had a convulsion two nights in succession before the doctor had been called to the case, and that she had been quite stupid and unlike her usual self since that time. The knuckles of intestine lay without a particle of movement, no peristalsis; in fact, there is a condition of paralysis following a convulsion that so closely simulates obstruction, that it is with great difficulty that we come to a proper appreciation of the symptoms. This patient had also vomited very questionable matter, and together with the other symptoms seemed a plain case for operative treatment; but there was a question of doubt, and after waiting a period, the sulphate of magnesia in large and repeated

¹ Read at the Philadelphia County Medical Society, October 14, 1891. For Discussion, see page 356.

doses by injection, brought the result, clearly showing that we must be on our guard with every case.

The stomach exercises a marked influence in obstruction of the bowel; the changed current and direction of the bowel contents, in its effort to find an exit, changes the stomach from an organ for the digestion of food to that of a pump for the elimination of the contents of the bowel through the mouth, and by so doing gives us a direct and positive indication for treatment, which to be most effective must precede any operative treatment that may be required.

We should empty the stomach and wash out all the contained fluid and solid contents. How best to do this is a question by no means yet answered. For my part I much prefer the stomach, aided by warm water and a mild emetic, to do the work, when the patient is in a condition to warrant such an effort, but many of them will not; then only the pump must be used. It is a most disagreeable instrument and should be used with great care, and not removed until all the work of flushing the stomach is finished. If you operate for strangulated hernia after there has been fecal vomiting, and leave the stomach to get rid of its disagreeable contents as best it can, you have but half done your work, and more than probable the portion left undone will finish your patient.

In a complete cleaning out of the stomach you have added greatly to your patient's comfort, and to his immediate and rapid recovery; beside having left nothing in the way of a clear surgical conscience. Therefore a stomach-pump is requisite to perfect work in obstruction.

Treatment.—The saline treatment of complicated inflammatory conditions, and those simulating inflammatory obstruction of the bowel, are of twofold value; first in clearing out a bowel not obstructed, but torpid and distended with all the filth of months; again, in actual obstruction, where we have a condition of paralysis produced by the inflammatory condition, which can best be removed by sulphate of magnesia. The effect of the saline does not in the least hinder the operative treatment, but prepares the patient for a much more speedy recovery from the effects of the inflammatory condition and the operation for the removal of the cause of the obstruction. If the obstruction be purely mechanical, then the saline aids the efforts of nature to promptly throw off all the retained and decomposing materials remaining dammed up in the intestine by the obstruction.

After an obstruction of the bowel has existed, even for only a short time, the distension has in most cases been so great that it takes a long time for the bowel to recover its tone and normal function, and if the saline treatment has been used before the operation the time for recovery will be much shortened and the risk and suffering of the patient correspondingly lessened. All those who have done intestinal work have been impressed with the length of time after an operation for strangulated hernia before any action of the bowels can be had, even with salines. I have had as much as six and eight days pass before I could get the bowels moving in cases of obstruction of the bowel from inflammatory incarceration. And in another case as much as eleven days intervened after a resection of five inches of obstructed colon from epithelioma and uniting them by the Senn method. In this case four ounces of magnesia sulphate was given before any result. In several of my cases I feared that I would have to do them over; and I have no doubt the abdomen has been reopened many times after abdominal operations for a supposed obstruction, when none existed. So great care and judg-

ment is required in these cases, that something positive only should drive us to a second operation. Simple want of a movement of the bowels should put us on our guard and watchful for more certain symptoms of obstruction.

Now as to how sulphate of magnesia will give the best and quickest result: Small and repeated doses diluted with as much water as the patient will take is by all odds the best mode of giving the drug. When the stomach is irritable and sick, it is best given by injection per rectum—an ounce of the drug in half a pint of warm water. If you can give by the stomach and bowel at the same time, you will soon get the result.

There can be no objection to other drugs being used, such as the mild chloride of mercury, Rochelle salts, that will accomplish the object for which we use purgative treatment. Mixed treatment of opium and purgatives does no good, but introduces an element of doubt and danger that is hard to estimate; it also tends to prevent a proper appreciation of what nature is doing to save the internal viscera from permanent destruction and death. If we give purgatives we must give them for a purpose, and until that object is attained we should wait until we are perfectly satisfied that nothing but an operation will open the way for a passage, or that our patient cannot be relieved, and then the opium treatment will be appropriate; then use it, but not while there is a chance for the patient's recovery.

Mode of Operating.—The method of operating for strangulation of the bowel or hernia is of great importance, and should be seriously considered before operation. The method of cutting directly down on the hernia will not answer in all cases; old irreducible hernias, where both sides are down and irreducible with symptoms of obstruction; double femoral, also irreducible, and in cases where there are no external symptoms pointing to the location of the disease—these can best be dealt with through a median incision.

The usual opening for abdominal operations of one and a half inches is plenty of room in which to do all the work that is required for the relief of the patient in most cases, and when we find we require more room, it is easy to enlarge the incision. Through this opening a thorough investigation of the abdominal cavity can be made, the old hernia irreducible protrusions can be examined with two fingers in the peritoneal cavity, and the seat of the strangulation located.

The fact that there is a hernial protrusion on either side is no proof that one of them is the point of strangulation; it may be anywhere in the length of the intestine. Then, to open such a patient over the supposed point of strangulation would greatly complicate the case, and leave the surgeon in doubt as to whether his patient had been relieved of his strangulation, for often in operating for strangulated hernia, I have had the intestines slip from the sac into the peritoneal cavity, and it was considerable trouble to get hold of the portion strangulated so as to examine its condition before closing up the abdominal cavity. Until the point of strangulation is found and examined, you can never be sure your patient is relieved of his dangerous condition.

Then, again, there is no better way to ascertain which is the obstructed side save through a median incision, both sides being within easy reach, and can be examined and dealt with with certainty. When the position of the strangulation is determined, it is an easy matter to cut down and release the hernia

from its sac, and return it to the inside, and bring the intestine to the median opening, and there examine its condition, and if there is a show of returning life to the strangulated portion, then wash with warm water that has been boiled, and return to the peritoneal cavity with as little delay as possible. The closure of the wound is of moment, for on the manner of doing this depends the success of a radical cure of your patient.

Leaving the sac outside in position, and taking a long, straight needle, and with two fingers in the peritoneum, push the needle through the abdominal wall, taking care to include all of its wall, so that when it is closed there will be plenty of tissue; it does not require to be very tightly tied, but just sufficient to make a perfect approximation. Before making your closure, trim up your sac and remove all portions thickened and diseased that could interfere with perfect union of the hernial wound.

The inside fingers act as a guide to protect the bowels and to aid to a proper placing of the sutures, and as the sutures are being tied assure yourself that all is clear and a perfect closure made. This can be determined with perfect accuracy.

The gaseous distention of the abdomen is a most serious complication, and offers many impediments to a proper diagnosis; that it must be gotten rid of before the patient be relieved is admitted by all. Puncture through the abdominal wall with any instrument is dangerous in the extreme; to use a hypodermic needle would be a useless procedure, as much larger openings are required before the gas will be discharged. I have repeatedly tried to empty the bowel in this manner, and feel confident that it would require days to do so. An opening should be made with the knife or some instrument that will puncture the bowel, and the instrument then opened, stretching the bowel, giving exit to the gas. For this purpose I have had an instrument made almost identical in form with the little ear speculum, bringing the trumpet to a point, with which to make the puncture. The opening can then be stretched, and the closure will require only one stitch, while that made by a knife would necessitate several. I have used it only once. It answered the purpose admirably. As the needle rapidly enlarges from its point the bowel must be grasped by the fingers to prevent slipping while being dilated. Besides this advantage the instrument shortens the operation, lessens the shock, and prevents leakage. Comparing methods of treating obstruction of the bowel, there is but one treatment, that is to open the patient and correct the trouble—when I say that I do not mean that there shall be a half dozen consultations before this treatment is resorted to, and I will venture to say the mortality will be reduced from its present high figures to 15 per cent. Those credited cured by other methods in most instances were mistakes in diagnosis. No one was ever killed or their danger increased by an exploratory operation.

Much of the recent work done in abdominal surgery has been by men who base their opinions on experiments on dogs. This work accomplishes only one good—it prepares the surgeon with manipulative skill and dexterity in operating. But this experimental or dog surgery has not a single feature in common with that on the human subject, for there is no resemblance either in the operation or the conditions present. The one is on a healthy animal with an intestine only one-third the length of the human, and has been used for the passage of the coarsest food and the most indigestible materials.

With no nervous element to contend with, no pathological condition to contend with, no distention or delay, no previous shock or destruction of parts, no inflammatory element to remove, no complications to hinder or delay the operative work, no half-dozen consultations, no opium or belladonna previous to operative work—in fact, the one differs from the other as day differs from night. And it is these very conditions, and complications, and delays that make all the difference between life and death. Could we bring the profession to look at the conditions and dangers of peritonitis and obstruction of the bowel in its proper light, and have all such conditions treated at an early period, there would be some chance for the patient to recover from the mischief already done by the disease, for intra-peritoneal inflammatory conditions soon destroy life. The surgeon cannot do any harm nor add one feather's weight to the already dangerous condition, but with good work will save hundreds of valuable lives. Senn's experimental work on dogs was for a definite purpose, which he has beautifully set forth in his book, and clearly demonstrated to us all, and those of us who work in this field can only hope to be imitators of him.

Dr. Theodore McGraw, of Detroit, gives us a most ingenious method of managing some of the more desperate cases of intestinal obstruction. In complete gangrene of the bowel I imagine it will be of great service in saving life. In these cases we are compelled to make an artificial anus; which will relieve the urgent symptoms of distension, while, at the same time, the rubber ligature recommended by Dr. McGraw passed through two or three inches below the artificial anus, through the upper and lower segments of intestine, including at least one and a half inches, and tied as tightly as possible, and the knot secured by ligature; then either a continuous or interrupted Lembert suture around this ligatured portion, and, by the time the ligature has cut its way through, the union will be complete, without any possibility of leakage, and with but little delay or prolongation of the operation.

Complete exit will be given through the artificial anus to all distending gases and contents of the bowel, until the artificial opening is complete (which is three or four days), when the artificial anus can be closed by silkworm-gut sutures placed at the time of operation. This method also comes to our relief in obstruction of the gall-duct. In these cases the abdomen is opened, the gall-bladder emptied of its contents, the rubber ligature used to unite the intestine to the gall-bladder, the additional suturing of the peritoneal covering of the bowel and gall-bladder, so as to insure perfect union, and in three or four days the abdominal wound can be closed with silkworm-gut sutures; the fistulous opening between the gall-bladder and bowel—made by the rubber ligature—will prevent many of the annoyances and inconveniences of having a biliary fistula.

It will in many ways answer a better purpose than the Senn method, but in the vast majority of cases Dr. Senn's method of anastomosis is our only one to save life; we cannot wait two or three days for an opening to be made; therefore, of necessity, we must resort to the method of Senn.

I have used Dr. Senn's method three times, with two recoveries, and must say I have more admiration for him and his work than any intestinal surgeon in the world.

I have found, in using the Senn plate or the Abbe catgut ring for intestinal anastomosis, that one of the greatest difficulties to overcome was the passing of

the silk ligatures through the intestine, there being four or six of them in each plate or ring. When they were threaded in the ordinary sewing needle they became entangled and greatly prolonged the operation, or, if they had to be threaded during the operation, it was the cause of considerable delay, and for a long time I have been trying to find a substitute that would answer the purpose without any of the objectionable delays. I have found the desired needle in the self-threading Supplee sewing-machine needle. In the use of this needle the operation is shortened at least four-fifths, all the threads being passed rapidly and without delay.

The ring or plate placed in position, the operator holds the needle with the open face of the eye toward him, the assistant takes up the ligature, draws it taut at right angles to the needle over the eye, and it is at once threaded. The operator quickly passes it through the intestine, half an inch from its cut border, and the assistant withdraws the ligature from the eye. The same process is gone through with all the sutures, and it is done in a moment, without delay.

"Ashhurst tabulated 57 cases of laparotomy for acute intestinal obstruction from other causes than intussusception, from which it will be seen that only 18 terminated favorably. At that time the mortality of laparotomy in cases of intestinal obstruction other than intussusception was over 68 per cent. Most of these operations were performed without antiseptic precaution."—Senn, page 28.

I have had a greater number recover from this operation, and have operated for obstruction only 24 times, and always without antiseptic dangers; only clean Philadelphia water; 19 recovered.

Dr. Ward, of Topeka, Kansas, recommends a most ingenious method for finding the proximal and distal ends of the intestine. Pass the fingers directly down to the attachment of the mesentery to the spine, and the position of the two ends will be immediately established, as the lower attachment of the mesentery must of necessity belong to the lower end of the bowel.

GUNSHOT WOUND, WITH USE OF THE ELECTRIC PROBE.¹

By A. B. KIRKPATRICK, M.D.

MR. S. came to my office Friday, 3 A. M., October 2. He was stage manager for the Grand Opera Company, and is now dramatic teacher at Penn Conservatory of Music. He returned from the theatre after attending to some business after the performance, and happened to think of a loaded revolver, and thought best to remove the cartridges, and believed he had removed the last one when his wife spoke to him, and his attention was drawn from the revolver a moment, and in that instant it went off, and he received the bullet, thirty-two caliber, in the leg above the knee. The muzzle of the revolver was not more than six inches distant, and the trouser leg was blackened and scorched.

Mrs. S. urged him to go at once to the doctor, and supported and assisted him to walk the three squares, and he was nearly exhausted by the time he reached my residence.

I gave him a stimulant and probed for the bullet, and thought I located it just above the patella on

inner condyle of the left femur. The probing was very painful, and I was unable to get hold of the ball with the forceps, and I did not care to give an anesthetic and go on with the operation without assistance, so I put him to bed and gave him a hypodermic of morphine and atropine, and he slept until 8 A. M.

I sent for Drs. W. H. and C. B. Warder, and for an electric bullet-probe, which I had seen a day or two before. At 11 A. M. the doctors came, and Mr. Yarnall sent a man with the probe. Dr. Warder, Jr., etherized the patient, and Dr. Warder, Sr., enlarged the wound and searched for the bullet carefully. He found a rough spot on the condyle, where apparently the bullet had struck and roughened the bone, and then been deflected and passed into the popliteal region, as the course of the bullet had been downward, forward and outward.

Mr. S. is a bicyclist, and has a fine muscular development—the wound being over two and one-half inches deep. We were about giving up the search when I felt what was apparently a spicula of bone, and to determine the fact passed the electric probe down along my finger, and with considerable difficulty placed it on the rough point. The alarm sounded, and we were convinced that the point was a corner of the bullet. I enlarged the wound and found it so. The bullet was buried in the bone, and the periosteum had closed over it, except a little corner as large as a pin-head, which had been turned up by the bone. We were not supplied with bone-chisel, or gouge, and the bullet was below the surface of the bone, so forceps were of no use. I drew on the family tool-chest for a gouge and the kitchen for the potato-masher, which I used as a mallet, and chiseled the bone away on one side so that I could pry the bullet out. We syringed out the wound with bichloride solution, 1 to 4,000, and Dr. Warder put in the sutures and a gum drainage tube, and covered the wound with iodoform gauze, and placed it in an improvised splint of trunk board.

The operation was long and tedious, and the patient did not regain consciousness until 3 P. M. He was too weak to remove from operating-chair until 9 P. M., at which time he walked to the next room on crutches and went to bed.

In June he had suffered from functional disturbance of the heart from excessive smoking. He did not react well after the operation, and the heart was weak and irregular, so I gave hypodermics of strychnine and atropine, and inhalation of ammonia, and used hot-water bags. There was no vomiting. He had a temperature of 101° the evening of the operation and 102° next day. The third day 101°, and the fourth day normal. He required no anodyne whatever. The day after the operation I gave calomel, ipecac, and soda, followed by a Seidlitz powder, which moved the bowels freely. I also gave a five-grain powder of phenacetine every two hours until the temperature fell to normal.

The day after the operation I looked at the drainage tube, and applied fresh gauze, and the second day syringed out the wound with bichloride solution, 1 to 4,000. The morning of the fifth day the stitches were removed, and their place supplied by narrow strips of plaster. The patient sat up the sixth day, and I took him home the seventh day, and he has been walking around on crutches since. Yesterday was the eleventh day, and he was at a rehearsal, and expects to begin his usual work to-morrow evening. He kindly offered to come here to-night, and Mr. Yarnall is with us to exhibit the electric probe.

¹ Read at the Philadelphia County Medical Society, October 14, 1891.

AN INSTRUMENT FOR MAKING APPLICATION TO THE UTERINE AND URETHRAL CANALS.¹

By A. B. KIRKPATRICK, M.D.

FOR the past three years I have been working in the Philadelphia Medical Mission, and it has been necessary for me to do considerable gynecological and venereal work, minor operations for misplacements, endocervicitis, endometritis, lacerations, etc.

I have been experimenting to find a rapid, cleanly, and economical way of making applications to the endometrium and urethra.

I have used suppositories, tampons, and medicated bougies, only to be disappointed. To my mind the excipient in medicated bougies and suppositories prevents the absorption of the medicament by coating the passage, and when the suppository or bougie liquefies, by the heat of the body, the medicament is drained away from the location where placed and needed.

I began the use of powder by insufflation to the cervix and vagina several years ago, and for ulcerated conditions of cervix it gives excellent results.

My first instrument, which I made myself over a year ago, was a hard rubber insufflator tube with a wire wrapped on the extremity with thread. With this crude instrument I could push powder, boracic acid, iodoform, aristol, etc., into the cervical canal or urethra. At my request last April, Mr. Yarnall made me this instrument, which originally had a copper wire for piston, tipped and packed like a hypodermic syringe piston, and in place of the finger pieces, a half-inch hard-rubber collar. The copper wire bent and stretched on straightening and the leather packing was not clean or aseptic.

This improved applicator is made of a seamless aluminum tube with a steel piston aluminum-pointed and steel finger and thumb pieces. It is very simple in construction and is easily used.

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, October 14, 1891.

The President, JOHN B. ROBERTS, M. D., in the Chair.

OBSTRUCTION OF THE BOWEL,²

WAS the title of a paper read by Dr. M. Price.

DISCUSSION.

DR. JOSEPH PRICE: As I am quite familiar with what the author has said and done, I shall have little to say about the paper. The old classification of acute and chronic obstruction is quite sufficient for surgical purposes. I wish simply to call attention to a few points derived from my clinical experience: First, in regard to the casual relations which surgery bears to some forms of obstruction. The author has alluded to the reduction of hernia without the relief of the inflammatory adhesions causing strangulation. Only a short time ago some one presented to the

Pathological Society a reduced strangulated hernia. It was fortunate for surgery that in that particular case a post-mortem was secured. I am satisfied that if more examinations were made in the fatal cases of hernia operation, reduced strangulations would be found frequently. My own practice is to open the sac and deliver the bowel and free it from all strangulating bands. If you simply sever the stricture either by the old or new method, and do not draw the bowel out completely, you will fail to recognize the construction that commonly exists about its neck. I would make it an inflexible rule to expose the bowel in all hernia operations.

Again, those forms of acute strangulation due to bands about the appendix and the pedicle of removed cystoma, which in many cases are sequellæ of appendicitis or pelvic inflammatory trouble, and are not a very small or simple class of cases. Only two days ago I attempted to remove an abscess of the right ovary and tube, and found overlying and fixed to these pus accumulations all the ileum that could get into the pelvic cavity. I found complete strangulation of at least four inches of the ileum and perforation at two points—I mean complete as we commonly understand such strangulation from inflammatory thickening and kinking with fixation. In removing the bowel I laid open two cheesy portions of the bowel, necessitating anastomosis and resection. It is in this class of cases that we lose our patients unless we complete the enucleation of such thickened and adherent bowel. The neglect of this is a common cause of death in pelvic inflammatory troubles. On two occasions I have had to reproach myself, notwithstanding I knew at the time of the sections, which were difficult and complicated, that I had not completed my work to my own satisfaction. In a few days I had cause to re-open both of these cases. I have now a patient in bed after the removal of the fused viscera of the pelvis, and I spent probably half an hour in the removal of the strangulated and adherent bowel. It was fused to that extent that it was impossible to see the mesentery on either side before freeing the adhesions.

Another class of cases is of interest in this connection because we have had so many new methods proposed for their relief. One of these methods, proposed by the Germans, is by removal of the coccyx and going in posteriorly and removing the pelvic mischief. Such a method must always result in the neglect or non-recognition and relief of bowel complications above. The same serious objection applies to the recent French method of dealing with pelvic inflammatory troubles by the vaginal method of extirpation of pelvic viscera. If by this method we could deal with bowel adhesions I would welcome it, for in many forms of tubal and ovarian trouble we leave behind a great deal of filth when we permit the uterus to remain. Dr. Coe has reported ten cases of vaginal hysterectomy, two of which died of strangulation, I think in a short time after the operation. It is not improbable that in these cases tubal and ovarian disease with adhesions existed, and that in the removal of the uterus the effect of these adhesions was increased. In a case yesterday where I removed the uterus for cancer, I found double hydrosalpinx with bowel adhesions. In this case I operated by the vaginal method and brought the bowel to the vaginal orifice to free it. If in this case there develops the slightest indications of bowel adhesions, I shall operate at once. Again, there is a group of cases—obstructions due to bands of adhesions following the use of chemical solutions in abdominal operations.

¹ Read at the Philadelphia County Medical Society, October 14, 1891. For Discussion, see page 357.

² See page 352.

AN INSTRUMENT FOR MAKING APPLICATION TO THE
UTERINE AND URETHRAL CANALS,¹

Was the title of a paper by A. B. KIRKPATRICK, M.D.

DR. JOHN C. DA COSTA: The powder applicator presented shows how different people may arrive at the same conclusions without ever discussing the matter with each other. It is a capital little arrangement, but I have one that is precisely similar in principle, given to me some ten years ago by Dr. Ellerslie Wallace. One of his favorite applications to the endometrium was powdered sulphate of zinc, which he applied with the instrument. One reason why we often fail to get good results from ointments is that the uterine canal is sometimes covered with a glairy deposit of mucus. Before an ointment can come in contact with the membrane this mucus must be removed. A powder may act differently, for it is retained, and if soluble, will gradually melt and pass through the mucus.

DR. C. P. NOBLE: I wish to make a few remarks bearing on the general principle of the application of medicaments inside of the uterus. My own experience has led me to the conclusion to which the attention of the profession was called by Dr. Emmet, that applications inside of the uterus are very seldom indicated, and that their field of usefulness is extremely restricted. I think that Dr. Emmet and his co-laborers have shown that the majority of cases of discharge from the uterus are not caused by inflammatory trouble inside of the uterus, but by disease outside of that organ, and, therefore, it is illogical to make applications to the interior of the uterus in the class of cases under consideration. The treatment of the causative lesions in these cases is much more satisfactory, less painful, and free from certain dangers which attach to applications to the endometrium—including uterine colic, and salpingo-peritonitis. I am, however, quite satisfied that there are cases in which it is proper to make applications inside of the uterus, as, for instance, cases of purulent endometritis, due to gonorrhœa, for example. In fungous endometritis, where the condition is not sufficiently marked to require the curette, applications to the endometrium are useful and will often effect a cure. In the condition formerly called endometritis, the evidence of which was uterine discharge, I take it that treatment of the endometrium is not indicated, and is harmful rather than beneficial.

MEDICAL AND SURGICAL SOCIETY OF
BALTIMORE.

Stated Meeting Held Thursday, June 11, 1891.

THE 728th regular meeting of the Society was called to order by the First Vice-President, DR. F. C. BRESSLER.

Minutes of previous meeting read and approved.

The following gentlemen were elected to membership: Dr. W. B. Perry, Dr. O. S. Mahon, Dr. E. B. Fenby, Dr. Arthur H. Mann, Jr., Dr. Chas. M. Morfit, Dr. D. V. Moyer, Dr. F. Dyer Sanger.

DR. DAVID STREETT related a case of Ante-partum Hemorrhage. Mrs. V., aged thirty; pregnant for the fifth time in seven years, healthy in appearance and at about the end of seventh month of utero-gestation. Her previous four confinements were of short duration and perfectly normal.

Was called to see her on June 10, about 12 P. M., and learned that she had been active as usual about

her household duties, and that about 10 A. M., while out walking, mild labor pains came on and continued, very moderately, until late in the evening, when they disappeared.

She retired at 10 P. M., feeling quite well, and at 11.30 was awakened by what she thought was urine flowing from the vulva. On lighting the gas, she discovered her clothing and bedding stained with blood; feeling a desire to urinate, she discovered, on rising, about a pint of blood in the vessel.

Examination showed patient with good color, pulse 85, with mild uterine pains, and blood flowing in alarming quantity from the vagina; cervix uteri long, external os large and open, internal os well marked and firm, and neck thick. Sweeping the finger around inside the uterus as high up as could be reached revealed nothing unusual. A diagnosis of accidental detachment of a normally implanted placenta was made. ʒj of Squibb's fl. ext. ergot was administered, and medical aid summoned. By the time assistance arrived the hemorrhage had ceased, uterus was firm and membranes tense.

It was decided to continue the ergot and wait developments. Uterine contractions increased, and the first stage of labor was completed, without anything unusual occurring, at 2 P. M., on the 11th, making fourteen and one-half hours from the time she was awakened; the duration of the second stage was fifteen minutes, and the third stage about three minutes. Presentation vertex, position L. O. I. A.

Placenta appeared at the vulva immediately after the birth of the child; it was expelled without the use of any traction. Large, black and firm clots followed the placenta, some as large as a tea-cup. A large clot was attached to the placenta at one edge, and dipped down to the bottom of sulci, between the cotyledons, and could not be detached without force. At the bottom of the sulci, the placenta was somewhat torn.

Dr. Streett, continuing, said he could not determine whether this tearing of the placental tissue was ante-partum or whether it was post-partum, and due, probably to compression of placenta during expulsion.

A point of interest is the source of hemorrhage. Some of these cases are due to nephritis—the soft placental tissue having vessels where the walls are evidently degenerated and rupture during the course of the nephritis, much the same as those of other parts of the body. There was in this case a history of the patient (on June 9) feeling somewhat strained on boarding a street car. Could it be that at this time the placental vessels were ruptured, and clots formed, and that the subsequent hemorrhage was due to muscular action, the blood then finding its way externally? He was much impressed with the gravity of these cases. In the last twelve or thirteen years he had seen six cases of this kind. One died within fifteen minutes after his arrival, and before she could be delivered. His confrère, in this case, introduced his hand and found detachment of the placenta. He had found ʒj doses of fl. ext. of ergot to be of service in these cases.

DR. WM. H. NORRIS said Dr. Streett does not tell us whether or not any efforts at abortion had been made in these cases. He had a case similar to these some time ago, from injury, and there was a clear case of trauma. These are points of interest, and it is to be regretted that Dr. Streett did not enter more fully into the etiology. He was fully in accord with the treatment used, and has found, in a practice of over thirty-five years, that ergot used judiciously in such cases acted well and promptly, notwithstanding

¹ See page 356.

the fact that most obstetricians to-day teach that ergot should not be used until the uterus is empty.

DR. E. M. REID said in using ergot in these cases, at term, where the os is not fully dilated, he thought small doses of 10 or 15 minims would suffice to lessen the interval between the pains and to keep up general contractions, and that the large doses should be reserved until after the delivery of the child. In one case of ante-partum hemorrhage at six months he tamponed the vagina, and removed the packing in twenty-four hours; the case went on to full term. This shows that packing the vagina is not *always* dangerous. The simple question is that you are to exercise judgment, and treat each case on its own merits; you cannot lay down any infallible rules to govern all these cases alike. If you watch them and are attentive, you can tide them over. When a woman has lost a large amount of blood, she is not in condition to be subjected to any heroic treatment; he has seen cases, where to have proceeded at once to induce labor, would have been fatal. If you can tide over your case until your patient can make up for this loss of blood, she will then be in better condition to be subjected to induced labor.

DR. J. W. CHAMBERS said he thought in a case where a woman was bleeding alarmingly, the only safe plan to pursue was to empty the uterus immediately. He did not think that ergot does good except to close the vessels. As to packing the vagina, he thought the day of the tampon was over; it hides the hemorrhage, and has a moral effect on the patient, but the hemorrhage is going on all the same.

DR. DAVID STREETT said as to attempts to do abortion, these cases were in ladies of family, and were all near term, so that abortion was not to be thought of, as there was no possible motive for it. An interesting point in these cases is after giving ergot. When should the membranes be ruptured? In two of these cases the membranes were ruptured, in three the membranes were not ruptured until the os was well dilated. In all five the labor proceeded normally after the hemorrhage was controlled. He thought that if the integrity of the membranes could be maintained, we have a better chance of controlling the hemorrhage.

DR. A. V. GOSWEILER read a paper entitled

INFANTILE PARALYSIS.

DR. WM. H. NORRIS said Dr. Gosweiler has given us an exhaustive paper on this interesting subject. The differential diagnosis between infantile paralysis and other forms of paralysis is important. When called to a case we must diagnose between it and multiple neuritis. The latter is more frequent in the adult, while infantile paralysis or polio-myelitis is more frequent in children. Another point to bear in mind is that multiple neuritis attacks the upper extremities more frequently, while polio myelitis most often attacks the lower extremities.

DR. F. C. BRESSLER said Dr. Gosweiler's paper is so exhaustive that there is little to say. The name infantile paralysis is an unfortunate one, as it is meaningless and does not convey anything to the mind. Polio-myelitis, on the other hand, conveys to the mind a definite idea as to the lesion, and is to be preferred on that account. There must be some reason why this disease occurs more frequently in children than in adults. An explanation may be found in the rapid development of the spinal cord, in proportion to the other parts of the body in childhood. Trauma is seldom a cause. He thought it probable that it was an infectious disease. The

characteristic feature of the disease is the immediate paralysis, its subsequent developments being improvement. He doubted if any cases get entirely well. If we have a destruction of a nerve cell, he could not see how it could be replaced or renewed.

DR. E. M. REID reported a case of Convulsions in a Pregnant Woman. He said he wished to present his case because of its medico-legal aspect. On the 24th of May, was called to see a lady with convulsions, who was six months pregnant. She had had two convulsions, was having one at the time of first visit, and had one afterwards. Her face was swollen and œdematous; in fact, the whole body was anasarca. A small quantity of ether was used to control the convulsions, and as soon as she could swallow she was placed on fl. ext. jaborandi 3ss every four hours, also 3ss doses of cream tartar every six hours. The jaborandi was followed by profuse sweating, and the cream of tartar produced copious stools. A test of the urine showed it to be almost solid albumen. She is now taking inf. digitalis 3ss every four hours. The swelling has disappeared now, and it can be scarcely recognized, even about the ankles. There is a disappearance of the albumen also.

The consensus of opinion seems to be that the os should have been dilated, and she should have been delivered as soon as the convulsions came on. But the question arises, Should you induce premature labor when you find solid albumen? What is the proper mode of procedure in cases of this kind? At first she passed about two ounces of urine in twenty-four hours, now she passes from one to two pints daily. In the event of a patient's doing apparently well under these circumstances, should we proceed to carry out the rule and produce premature labor?

DR. F. C. BRESSLER said when Dr. Reid gets home to-night, if he should learn that his patient had died, what effect would the law have? If she passed two pints of urine yesterday and one pint to-day, he had better induce labor, and put her out of jeopardy. It is true that in most of these cases of nephritis in pregnant women, they are due to previous attacks, but if it were his case he would empty the uterus.

DR. J. W. CHAMBERS said the question for Dr. Reid to determine is this: If the condition of the kidneys is due to the pregnancy, then the uterus should be emptied. If it is an acute nephritis, independent of the pregnancy, then the proper treatment is to do just what he is doing. The solid albumen was shown *after* the convulsions. Now it becomes a question whether the albumen was not the result of the convulsions, rather than the cause of them. He thought if he should be called to see a woman with convulsions in the sixth month of pregnancy, he would induce labor and empty the uterus.

DR. REID said by what means can you determine what is "reasonable care and skill?" It would be well to have the opinion of those who are experts in this branch of obstetrics. When the science of medicine reaches such a stage where we can lay down absolute rules, then we may proceed to carry them out in any given case. Under similar circumstances, a gentleman induced labor on the grounds that it were best to empty the uterus; he lost both the child and the mother. Was this "reasonable care and skill?" Yet he was carrying out the rule. So far this case is improving, and it seems to be a case of acute Bright's disease, coincidental with pregnancy. It is now pushing on to the seventh month, and you know that a six months' child rarely survives after an induced labor. Her condition, to-night, is the same as the

vast majority of cases of pregnancy are in ; there is a small amount of albumen and no œdema.

J. WM. FUNCK, M.D., *Secretary*.

1710 W. FAYETTE STREET.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

THE following are some of the many interesting papers read at the St. Louis meeting October 14, 15 and 16, 1891 :

TEMPERATURE NO GUIDE IN PERITONITIS,

Was the subject of a paper by DR. H. C. DALTON, Superintendent of the St. Louis City Hospital. The doctor has become so skeptical on the subject of fever in peritonitis that he is no longer guided by the thermometer in considering the advisability of an operation in abdominal cases. He takes the temperature in all cases and weighs it for all it is worth, but does not let the lack of fever deter him from operating when other symptoms, on which he has learned to place far more reliance, would move him in the opposite direction. A number of cases were reported going to prove the presence of peritonitis in the absence of fever. He concludes that when fever is present in belly cases it is well to remember that it indicates peritonitis, its absence, however, does not warrant us in saying that peritonitis is not present, and should not blind us to the actual condition.

An interesting case of

PACHYMEMENINGITIS INTERNA,

With report and presentation of specimen, was the subject of a paper by DR. F. C. HOYT, of St. Joseph, Mo.

GASTROSTOMY FOR IMPERMEABLE STRICTURE OF THE CARDIAC END OF ŒSOPHAGUS,

Was the subject of a paper by DR. ARCH DIXON, of Henderson, Ky. The patient, who recovered, was presented to the Association. Subsequent dilation of the stricture was accomplished.

The Lights and Shadows of a Doctor's Life, was the subject of an address by DR. JOSEPH MATHEWS, of Louisville, Ky. The doctor's remarks were from the ludicrous to the grave, and at times brought tears, and at times shouts of laughter.

THE SEWERAGE SYSTEM OF CHICAGO,

Was the subject of a paper by DR. JOHN B. HAMILTON, of Chicago, which was listened to with much interest, in spite of the depth of the subject.

The President's Address was delivered by that official, DR. C. H. HUGHES, of St. Louis. After discussing and recounting the wonderful progress of medicine in recent years, the doctor then took up specialists and specialism. The true specialist should be largely a consultant to the general profession and mainly indebted to it for his practice. In discussing moral and social relations, he said that physicians are, as a class, honest men. We are often charged with incompetency but seldom with dishonesty—never justly the latter—for medicine, whatever her faults of head has none of heart toward mankind. She is the peer of all professions.

How Medicine has Helped Mankind was next discussed, and the ways found to be quite numerous.

Non-political Interference with Public Medical Charities, was considered. Where the spoils of political conflict were human victims, minds dethroned

and sacrificed to medical incompetency and party policy, we should secure for them the proper medical as well as custodial care. We should endeavor to so influence public opinion and to so use our ballots, that parties and politicians so politic and inhuman as to sacrifice the mental and physical maimed or ill in public hospitals and others of our eleemosynary institutions, whom it is our special duty, under Providence, to guard, shall know the profession's indignation and feel its power.

The doctor, in politics, has too long held aloof from the affairs of state, and as a consequence the great names of our medical history have no monuments to perpetuate their fame. Had we but looked well to our interests the President's Cabinet would long since have been represented by one member of the profession, as law, agriculture, finance, etc., we should have the Medical Minister of Public Health, for which the American Medical Association is just now pleading.

PELVIC INFLAMMATION IN WOMEN—A PATHOLOGICAL STUDY.

Paper read by DR. W. W. POTTER, of Buffalo.

The author affirmed that pelvic inflammations and their residues constitute about one-third the diseases the gynecologist treats, hence the importance of frequent discussions of all moot questions relating to the subject. He briefly reviewed the anatomical relations of the pelvic organs, calling attention to their enormous blood and nerve supply, which became both their weakness and their strength. He contrasted the pathology of Bennett, 1843, with that of Emmett, 1873, and the latter with the teachings of Tait, Price, Hegar and McMurtry of the present age. He referred to the pathological studies of Bernutz and Goupil of thirty years ago, and affirmed that the observations of the present had served to confirm the correctness of these pioneers.

He next asserted that the pathology of to-day had been established by operative surgery, which had shown that pelvic inflammation begins in the tubes or ovaries, and extends to adjacent structures through absorption or by contiguity; that it almost never begins in the cellular tissue, but may be carried there through the tubes and ovaries by infections, either specific, puerperal or traumatic. He affirmed that the inflammation was in most cases a peritonitis, intra-pelvic or local in character, and not a cellulitis; that para and perimetritis were misleading and confusing terms, hence should be dropped, and that the so-called pelvic abscess was a sequence of salpingitis, ovaritis or peritonitis, not a primitive accumulation in the areolar tissue itself.

The tentative management in these cases, rest, counter-irritation, hot sitz baths, vaginal douches, and attention to the digestive organs and general health, resulted in only temporary improvement, or in cure in a very small percentage. Those reported cured were generally, if the history could be known, subject to repeated relapses, and a frequent recurring pelvic peritonitis usually indicated leaky tubes. Electricity, too, had disappointed its most sanguine advocates and need not be considered.

In conclusion, he asserted that if these views be accepted, the logical deduction was to watch the early manifestations of the disease carefully, that competent surgical skill be invoked before the damage to important structures became too great to justify the expectation of successful operation.

OBSERVATIONS ON SURGICAL TREATMENT OF UTERINE TUMORS,

Was the subject of a paper by CHARLES A. L. REED, M. D., of Cincinnati.

He said there are certain solid tumors of the uterus that require no operation, but there are others which are uniformly recognized as demanding operation. They are for the most part rapidly growing tumors in young subjects; removable fibro-cystic tumors; soft cedematous tumors; large bleeding fibroids and those growths which give rise to ascitic accumulations. Attention is called to certain other classes of tumors in which operation was not usually advised, but the demonstrated dangers of the growths rendered surgical interference important if not imperative. These cases are small tumors of sub-mucous polypoid development in which there is a sero-sanguinous discharge, but in which a slight menorrhagia, but no further hemorrhage, leads to no apprehension of danger. Another class of smaller sub-mucous growths are generally pronounced bleeders, but the absence of gross enlargement of the uterus disarms apprehension on the part of the attendant. After citing at length a number of cases operated upon for these tumors, the author drew the following conclusions:

1. All persistently hemorrhagic uterine myomata of whatever variety should be advised early operation.

2. In young subjects with multinodular tumors, giving rise to alarming hemorrhage, the appendages should be removed when practicable as an alternative for total extirpation. But the latter operation should be done whenever the character of the growth will permit of its removal by dangers less than those which would be involved by its continued existence.

3. To these tumors already recognized as demanding operation, should be added those of uterine development which are liable to dangerous constriction by the uterine walls, and in which their destruction by this means might induce sepsis.

4. All cases of sub-serous growth, indolent, yet progressive in character, in which the tumor has become a menace to neighboring organs, whether hemorrhagic or not, should have exploratory incision with reference, first, to removal of the appendages, or second, of the neoplastic organ.

5. All growing tumors in women occurring beyond the menopause should be removed, if possible, by vaginal total extirpation, or by abdominal section.

6. All distinctly operable cases demanding interference should be advised operation at the earliest practicable moment.

The Polyclinic.

JEFFERSON HOSPITAL.

A VERY important thing in cerebral surgery is, always to have ready hot solutions, as the patients often show signs of collapse, in which event a douche of hot water, or bichloride or carbolic acid solution, or any hot antiseptic or aseptic solution applied constantly to the head, is the best means for restoration.

I have here a bottle of—we will call it—salve, consisting of wax, carbolic acid, and other ingredients, for the purpose of putting up the bones of the skull, in cases of serious hemorrhages which may occur in cerebral operations from the vessels between the tables of the skull. I use it for hemorrhage from a

small vessel; if large, I would not hesitate to drive in a bit of antiseptic match-stick, or catgut, or, better still, to crush the bone.

Whenever you open the skull, always open the dura mater. This is not a rule without exceptions, but almost so. When you have gone so far as to cut down to the dura, open it and look at the brain, as you may learn that which will require you to go on. You may learn that, which if you miss, you miss the whole pith of the operation. If I find nothing, I sew up the dura again.—*Keen*.

Why does amputation through the knee give the patient a better chance than above? If you amputate through the femur, you open the medullary cavity and have danger of osteo-myelitis, which was one of the most terrific causes of death during the civil war. Therefore, I did this amputation at the joint, because I wished to spare the medullary cavity, for when you open that canal, you are apt to have large sequestra and constitutional disturbance.—*Brinton*.

Prof. Brinton gave the following prescription to be used by injection into the bladder for its calmative effect, in irritated conditions of that organ:

R.—Uva ursi.....	3j
Lupulin.....	3ss
Boiling water.....	Oj
M. et add.	
Bicarbonate of potassium.....	3ij
Paregoric.....	3j

PENNSYLVANIA HOSPITAL.

THE characteristic stool of typhoid fever, as you probably have heard, is a stool of the consistence of pea soup; a thin yellowish stool, with small lumps suspended in it, of a very offensive odor. Often, however, you do not have the characteristic passages.—*Fisher*.

If a patient comes to you with a slow pulse, 80 to 90, and a temperature of 103° to 104°, there is probably very great reason to suspect the beginning of typhoid fever, particularly if he has complained for some days before, of violent headache, feeling as if there was an immense weight on the top of his head. That pulse-temperature ratio is hardly seen in any of the other acute exanthemata.

You know that the diagnosis at first may be difficult between typhoid fever and pneumonia. I have often seen such a mistake made in a patient suffering from pneumonia, particularly in the stage of congestion. There may be only a few rales, and the patient may be in a state of mental hebetude or dullness, yet, if you will examine, you will notice that the pulse is rapid in pneumonia, at least, more rapid than that of typhoid fever. So it is that the diagnosis may be difficult at first between typhoid fever and meningitis. You know that often typhoid fever is complicated by meningitis, but, as a rule, if the disease is meningeal from the start, the pulse is a rapid pulse, and that is an important distinction.—*Fisher*.

As a rule, I think physicians are getting to trust less and less to internal medication in typhoid fever; but where the tongue is heavily coated, and there is very severe headache and a good deal of abdominal pain, then, in the early days, say the first or beginning of the second week, it has been my custom to order a few small doses of calomel until the bowels are freely moved, that is, unless free diarrhoea has occurred before. I generally order gr. iij of calomel, divided into twelve powders, one powder every three

hours until the bowels are moved. Of course, if any diarrhoea occurs, the powders are at once stopped. Generally speaking, the bowels are easily moved in the early stages, and we must avoid any purgatives that will increase the irritation already existing. I think calomel, in divided doses, can be given without fear, particularly in the early stages of the disease.

—Fisher.

The cold bath (a portable bath-tub at the bedside) has been used in the women's ward of the Pennsylvania Hospital in treatment of typhoid fever, and out of 20 cases under treatment, there has been no deaths.

—Fisher.

Dr. Meigs presented a case of exophthalmic goitre. In regard to treatment he said: There is a great deal of difference in opinion as to what should be done. I saw, in "Fagge's Practice of Medicine," somewhat to my surprise, that the tincture of iron, as a general thing, is not only useless, but injurious. That is quite contrary to what I have found and to what we follow. It has been my custom to give Basham's mixture, and it seems to me to have a beneficial effect. In the hospital we usually treat the patients with iron, to a greater or less extent, and digitalis in such amount as to steady the heart's action and increase its force. My own belief is that you may give gtt. x tr. of digitalis, and continue it indefinitely without danger of its cumulative action if you do not go beyond that quantity. If larger doses are given, you should keep your patient under observation. My custom has been to give the above dose, sometimes increasing the amount, and I have found, in these heart conditions, particularly where there is a large nervous element in the disease, that an additional dose of digitalis at night before going to bed, steadies the heart's action and induces sleep. So, my treatment would be, gtt. x tr. of digitalis, in water three times a day, and a fourth dose before going to bed if the patient cannot sleep. So also, when you have a heart trouble that is curable, I think you will find that a small or moderate dose of digitalis, on going to bed, will favorably effect the heart's action and induce sleep.

In these inflammations (gonorrhœal rheumatism) it would seem to me that the inflammation is of the joint surface itself, more than of the tissues around the joint, and that is why we have such intense pain. The prognosis is generally good, except for the danger of some permanent injury to the joints.

Treatment.—Although for my own part, I do not see that salicylic acid or its derivatives are of much value in these cases, yet I almost always try them, and do not feel that I have done my best for a severe case until I have given pure salicylic acid. I have seen cases where ʒj doses of salicylate of soda had no effect, and on substituting ʒj doses of salicylic acid, have entirely relieved the pain. You should begin with the salicylates, and then give salicylic acid, and if, after three or four days, you get no result, use iodide of potash gr. v-x three times a day, and other remedies as they are indicated.—Meigs.

PHILADELPHIA HOSPITAL.

TREATMENT OF SYPHILIS.

WHERE the patient is in good, strong, healthy condition, I give him protiodide, because it has not a cumulative action. It does not remain in the system and suddenly give rise to ptyalism. Besides, it is more manageable, and you can more readily

find out just how much the patient can take. I start with gr. $\frac{1}{4}$ in pill form three times a day after meals. After three days, the patient takes two pills after dinner; after three days more, he takes two after supper; and three days after that is taking two pills after each meal. The dose should be increased in this way until there is some griping or diarrhoea, when the number of pills should be gradually decreased until the patient experiences no discomfort. In this way you can find out how much he can take. Then the weight of the patient should be taken every week. He should remain stationary, or gain in weight under proper antisypilitic treatment, as he is taking the tonic dose, so that at the end of a couple of years he should be in better condition than ever.

The mercury should be continued for two months after all lesions have disappeared, and should then be discontinued for ten days. After this interval resume the mercury again, and at the end of two months reduce the dose one-fifth, keeping the patient on the reduced dose two months longer. Then stop the mercury entirely for one month, and so, intermitting, go on for two years, at the end of which time keep him under observation without treatment for one year, and if, during that year, the patient shows no sign of disease, you are safe in telling him he is cured, but if during that last year he should show further symptoms, you should continue treatment for eight months longer.

I am in the habit of giving with the mercury sulphate of morphine gr. $\frac{1}{4}$, which prevents griping; also tartar emetic, gr. $\frac{1}{4}$, which stimulates secretions and prevents accumulation of the mercury. At the end of six months I drop all except the mercury. In ninety-nine cases out of one hundred iodide of potash is not necessary. In those cases where you have the early appearance of the late secondary symptoms, it is beneficial in gr. x doses.

There are some cases in which you cannot make use of the protiodide alone. When the man is debilitated and broken down, then you must combine tonic treatment; blue mass, with sulphate of iron, gr. j; quinine, gr. j; and powdered opium, gr. $\frac{1}{2}$, three times daily. Corrosive sublimate, with tincture of the chloride of iron, may be given. I sometimes let the patient take protiodide before meals, and iron after meals.

Some cannot take mercury by the mouth, it giving rise to dyspepsia. In these cases corrosive sublimate may be given hypodermically, but this method causes a great deal of pain, and is likely to cause abscesses.

Inunctions of mercury are good, especially in young infants. Wash one foot, cover with blue ointment, and over it place a thick woolen stocking, which is kept on for twenty-four hours, after which the foot is washed, and the other foot treated in the same way. This is kept up for four days, and dropped for four days. In young infants you can apply the mercury under the binder.—Horwitz.

MEDICO-CHIRURGICAL HOSPITAL.

PROF. LAPLACE presented a case of fracture of the ascending portion of the lower jaw, complicated by the broken ends having caused a lacerated contused wound of the cheek. The jaw was rendered immobile by a pasteboard splint passing in front of and under the chin, retained by the proper bandages. Commenting on the laceration, he said:

It is difficult to treat.

1. Because it is a contused wound.

2. Because it is made by the teeth, which are laden with germs, the human bite being just as dangerous as that of any other animal.

The third reason is that the wound being in the mouth, those germs which make an ordinary bite by human teeth so dangerous, are constantly in contact with the wound. Hence these wounds are foul, have a bad smell, and the antiseptic principles cannot be applied. On the outside of the cheek the result of our treatment has been good, and we will remove the stitches. The wound inside the mouth must remain infected. There is no culture medium better fitted than the mouth to develop all the germs that can be developed.

In typhoid fever, during the stage of decline of fever, you do not generally have any dangerous complications arising.

You should give calomel, if at all, only in the beginning of the disease, when the strength of the patient is good, and the bowels are not as yet so loose. It is a good plan, perhaps, where there is a fair degree of strength, especially if there be constipation, every other day to give gr. v-x of calomel in addition to the antipyretic treatment. It seems to be the experience of those who have used calomel most, that the fastigium does not rise so high as in those cases where it is not used.

Do not give calomel within four or five days of the fastigium, and withdraw all depressing antipyretics you may have been using in the earlier stages of the disease, such as acetanilide, and give quinine gr. x night and morning.

There is no necessity, as a rule, for giving more than gr. v of acetanilide. I have found that gr. ij at night will reduce temperature to the same extent as five, or even ten grains.—*Anders.*

As to the treatment of typhoid fever, when the disease is passing off, and temperature has reached the normal point, we do not need longer to give antipyretics for their antipyretic effect. If we assist the healing of the ulcers, the fever will take care of itself. We are giving quinine in gr. ij doses, four times in twenty-four hours, for its tonic effect; also salol for its antiseptic action. Bear in mind that as soon as the temperature is normal, free stimulation is not only useless, but absolutely injurious; milk punch is given two or three times daily. We are also giving tr. cinchona 3j every two hours. German authorities tell us that seven to ten days should elapse, from the time the temperature has become normal until the patient gets out of bed, which, I think, is correct. Some advise getting up earlier, but if getting up too early does not produce a relapse the patient is more apt to commit some error as to diet and cause a recrudescence of fever which may last seven to ten days longer. Insist on keeping the patient in bed, at least a week from the first normal morning turning temperature, and prohibit all solid food during that time. While errors of diet may not have the power, *per se*, of producing a relapse, yet they seem to have the power where some virus remains latent in the system of arousing it to activity. It may be that the virus would have produced a relapse later on, anyhow, but I have seen relapses follow errors of diet. However, when all the virus is out of the system, errors of diet could not produce a relapse.—*Anders.*

THE regular quarterly business meeting and collation of the Medico-Legal Society of Philadelphia, was held at Horace B. Wimley's, 1604 North Broad street, on Tuesday evening, 27th inst., at 8 o'clock.

ACUTE YELLOW ATROPHY OF THE LIVER.—The patient was a married woman, twenty-six years of age, of good development and previous health. Her family history was negative, with the exception that her mother had died of phthisis. About January 7, of this year, she came to my office to see me with reference to a marked jaundice which she had. A week previously she had suddenly been seized with very violent, agonizing pain in the right hypogastrium, which was attended with vomiting, and followed in three days by rapidly-developed jaundice. The pain diminished as the latter condition increased.

I did not see her again for two weeks; during this interval she had more or less pain about the liver, occasional vomiting, fever at times, with now and then a rigor and heavy sweat. When I saw her she had a temperature of 105° F. She was exquisitely sensitive to pressure over the right hypochondrium and the epigastrium. There was considerable tympanites, so that it was impossible, then or later on, to determine the outlines of the liver. She was still intensely jaundiced. The stools were free and clay-colored. The temperature from this time (twenty-first day) on underwent most marked and irregular variations (from 99° F. to 105° F.), as did the pulse. Occasionally, during the fourth week, there was severe epistaxis and moderate hematemesis. The urine at no time showed any albumen. About the twenty-seventh day there was evidence of fluid in the peritoneal cavity. At this time a peculiar comatose gradually developed, increased to absolute coma, and led to a fatal termination on the thirtieth day. A few hours before death a few petechiæ appeared on one leg.

The post-mortem revealed the following condition: The first cut through the abdominal muscles revealed semi-fluid extravasations of blood in their substance. About a quart and a half of bloody serum was found in the abdominal cavity. All the organs were intensely jaundiced, and under the peritoneum everywhere, in the bladder and kidneys, were found extravasations of blood. The liver was fastened by recent adhesions, over a space about as large as one's hand, to the diaphragm. The liver itself was very much reduced in size; weighed but thirty ounces; had a smooth, non-adherent capsule; was intensely yellow on section, and very soft, almost diffuent, in consistence. The whole surface was free of lobular markings. All the other abdominal organs were normal.

Dr. Holt made sections, and found the typical microscopic appearances of that rare disease, *acute yellow atrophy*.

In conclusion, I would refer briefly to the points of agreement and disagreement between this case and the classical type. It differed in the very sudden and painful onset; in the absence of albumen during its whole course; in the presence of ascites, and, above all, in the long duration of the case, about thirty days. Thierfelder, in a list of 118 cases of this disease, found 114 to end fatally before the seventh day, and but one to reach the fourteenth. These, then, were the distracting features of the case. It agreed with the type in occurring in a female (this generally being true); in occurring in middle life; in the marked fluctuations of temperature and pulse; in the hemorrhagic symptoms, epistaxis, hematemesis and petechiæ; in the hematoxic symptoms, delirium, coma, etc., and last, but not the least conclusive symptom as to the nature of the case, in the fatal termination.—Van Zandt, *Lancet-Clinic*.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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A LITTLE KNOWLEDGE BETTER THAN NONE.

PROGRESS in medical matters, as in everything else, is in waves. Our forefathers were bled and purged, puked and salivated to death's door and beyond for trivial ailments, until homœopathy proved that people got well without any treatment, unless we consider the mental bamboozle of sugar pills a treatment.

With some modifications, the modern patient still oscillates between the extremes of having too much or too little done for him. Surgeons are trephining when there are no localized symptoms to justify it, and in certain cases of Jacksonian epilepsy, opportunity of an almost certainty of curing the patient by this means is neglected. To particularize, a lady aged thirty, with strumous adenitis had her breasts amputated for alleged scirrhus, and was induced to remain for years in an alleged hospital, resigned to the belief that there was no hope. She had been robbed of her time and money, and her enjoyment of life by ignorant frauds who had her in charge, and as might be expected, the physician who advised her of the true state of affairs and restored her to her family and usefulness received nothing for his services.

A pretty little married lady of twenty-five, was silently grieving over a diagnosis of cancer of the breast and the contemplated operation, when her sister's physician was accidentally consulted and pronounced the case to be one of simple mastitis, which yielded promptly and completely to judicious bandaging. Is it any wonder that the cancer quacks coin money out of the credulity of the public? On a par with this is the frightful abuse of bromides and morphine. Senile patients will be drenched with these to the verge of death, and rapid recovery will follow upon their withdrawal.

When people advance in intelligence enough to learn the true inwardness of why they often get well

under faith cure, Christian Science, or in spite of injudicious treatment, they are apt to run to the nihilistic extreme and decry all medication whatsoever.

Between the "laissez faire" cranks and the patent medicine gulpers, there are a few sensible people who have been educated into taking care of themselves by their family physician, and have acquired a respectable knowledge of what honest medication will do. There is an old saw to the effect that "a little knowledge is a dangerous thing," the truth of which Huxley denies, and claims, that had the little knowledge of the circulation now obtainable by any child in school, been known by Harvey in his day "he would have loomed upon the nineteenth century as an intellectual portent." So far from a little knowledge doing harm, particularly in medical matters, it would be well if the laity in general had the least modicum of it disseminated among them, in self-protection against the practitioners who know as little as they do. But it seems as though a general diffusion of this little knowledge were about to take place when everybody and his wife nowadays matriculates at some "medical school," and as only a small percentage "graduate," the majority become all the better patients for having learned what they did.

In the millenium every one will know enough of medical matters to enable the starvation of the legions of poor creatures who nowadays "practise medicine."

S. V. CLEVENGER.

THEY HAVE EYES, BUT SEE NOT.

It has always been a problem in therapeutics how best to introduce iodine within the system. The iodides of potash, soda, ammonium, have been regarded as the most feasible, and have proved fairly satisfactory. Nevertheless, there has been a lurking feeling that there must surely be something better, evidenced by the fact that all the antiseptics of iodine origin have been administered internally—with but small success, however.—*Canada Practitioner*.

SUCH items as the above are a never-ceasing source of wonder to us. Where are people's eyes? And ears? Things are advertised week by week that are of a value beyond all estimation to the doctor, and yet he never seems to know of them. One man once bewailed the absence of an efficient remedy for diphtheria. We asked him if he had used peroxide of hydrogen. No, he hadn't heard of it. We looked at him sadly, and informed him that Mr. Marchand had been telling him of the virtues of that wonderful remedy every week for over a year. But he "hadn't read the advertisements." A few weeks later he was simply wild about peroxide.

Such men are hopeless. They show enough animation in complaining of the inroads of specialists, quacks, and advertising druggists; but it never occurs to them that if they took some pains to inform themselves of the improvements in therapeutics there would be no field for quacks.

If the treatment of alcoholism had received the attention it deserved, there would have been no Keeley.

Mr. Carnrick finds the greatest difficulty in the way of his food lies in the ignorance of the practitioner concerning the physiology of digestion.

Mr. Gardner has gone to great expense in calling the attention of physicians to the value of hydriodic acid, as a means of overcoming the difficulty alluded to by our Canadian contemporary. And so with many other articles, that we might mention; whose neglect by the profession is simply incomprehensible.

Years ago we made it a rule to give a trial to every new thing that seemed to warrant it. The result has been so satisfactory that we turn eagerly to the advertising pages of our journals to see what new prizes are offered. Of course, some prove to be failures, and may even carry their failure on their face. For instance: An agent of the irrepressible type, one of those the profundity of whose ignorance is only equalled by the amount of his gall, spent some of our time in endeavoring to convince us that the only possible way we could get iron into our patients' blood was by the use of some German mess he advocated. His argument was, that as the use of iron blackened the stools, none of it was absorbed. We mildly insinuated that we *had* succeeded in giving iron, as shown by actual tests, with the hemacytometer; but this argument he treated with the contempt it deserved.

His preparation proved to be a very mild chalybeate, not any better in any way than a number of the ordinary ferruginous preparations.

These remarks apply to all classes of the profession. Frequently, in consultation with men of acknowledged standing, whose names are known far beyond the limits of the community in which they reside, we have been struck with their ignorance of the newest *materia medica*. Professor Tom wanted to know why we suggested the normal liquid instead of the tincture, when his patient's heart needed exactly so much *digitalis* and no more. Surgeon Dick proposed calomel and jalap' when the flatulent dyspepsia with chronic constipation called for maltine with cascara; and great gynecologist Harry, who has reluctantly agreed to spare the ovaries while we cure the dysmenorrhœa and headache with antikamnia, thinks that if hypodermics of morphine and atropine fail to cure, it's hardly worth while to try these new-fangled things. But—we started in to refresh ourselves with a good growl, and the result looks very much like an advertisement!

Annotations.

A CASE of incoördination with numbness of the feet and legs extending upward to the middle of the shins, and from the tips of the fingers to the centers of the palms, was caused by cocaine and morphine addiction, coupled with other debilitating dissipations, such as sexual excess, in a patient of thirty, who sought my advice in his rounds among the physicians.

One "professor" of neurology diagnosed his case as Landry's ascending paralysis, which usually terminates fatally in two weeks, and in which there are no sensory symptoms. After four months I received a letter from him in which he claimed to be recovering. The "professor's" students are doubtless diligently drilled in a varied and extensive assortment of misinformation.

S. V. CLEVENGER.

FEW men really grudge payment for satisfactory work. When a patient comes to the office for the first time, give him an hour and charge him well for it; instead of a routine five-minute interview and a routine fee. If his case demands steady treatment for an extended period, charge him a lump sum and let him see that he gets the worth of his money by coming regularly. If the case is a chronic incurable one, make a fixed charge per quarter. By such means you will keep your patient from running off to other practitioners, and will do him very much more good, than by simply giving detached prescriptions when he happens in.

IN the "Medical News and Miscellany" of this number will be found a digest of the rules and conditions under which patients are admitted to the hospitals of Philadelphia. This has been prepared by Dr. S. Traner Buck, the materials being obtained, by correspondence and visits, from the hospital authorities, with much labor. It was intended to publish this data in tabular form; but our pages proved to be too small for such extensive tables, and we were compelled to put the matter into the present form. The same data in regard to all the other charitable institutions of Philadelphia has been prepared, and will be published in the ensuing numbers of THE TIMES AND REGISTER. The object is that our readers may have in their hands all the necessary information in regard to the city hospitals and other institutions that they may need in directing patients where to go, what cases to send to each, who will treat them there, the cost, accommodations, etc.

A SANITARY GUIDE TO THE WEST INDIES.

OUR New England editor, Dr. Hutchinson, of Providence, has completed his last work and sent it to press. "Under the Southern Cross" is its title, and it contains the best part of the series of articles published in THE TIMES AND REGISTER during the past year, together with much new matter collected by the doctor while South last winter. As it stands, it is the only book extant which is authority upon the different sanitariums of the West Indies and Spanish Main, besides being a charming book of travel, full of story, adventure and brilliant description.

By its aid, American medical men will be enabled to choose the proper place for patients whom they desire to send South for climate treatment, and avoid mistakes that may prove serious, while pleasure tourist will find in its pages all that they will care or need to learn of those attractive regions.

The book will be beautifully illustrated from the author's sketches and photographs.

As the edition will be limited, orders should be sent in at once, and may be directed to this office, or to Dr. Hutchinson, Providence, R. I.

Letters to the Editor.

EXHAUSTED VITALITY.

THE editorial on "Exhausted Vitality," in THE TIMES AND REGISTER of September 26, 1891, covers in all respects a case I am prescribing for. I am giving a general tonic treatment, with rest, etc. Can you suggest anything better? If you can, please do me the favor to do so, giving all particulars such cases require.

D. B. H.

[The first duty is to convince the man that he is ill; so dangerously ill that everything else must be sacrificed to the duty of restoring him to health. He must break off vicious associations and habits, leave his business, his cares, and his worries. The three great remedies are *rest*, *exercise*, and *nourishment*. *Rest* from mental work and care; often even the newspaper must be forbidden; the brain must lie fallow. Travel may be necessary; banishment from home is imperative. Exercise, graduated to his strength; of an agreeable sort. Hunting and fishing suit some; cultivating fruit or flowers, or regular farming suit others; herding sheep or cattle still others. The tastes and the means must regulate this largely. Nutrition is most important. Many cases need building up; the digestion must be regulated; cod liver oil, the phosphates, iron and quinine are often requisite. Whenever the patient's means will allow, he should be accompanied by his physician and live under his direction. It is in general necessary that the full period of one year be allowed for the recuperative processes to complete their work; and the return to the patient's previous avocation should only be allowed after careful consideration. In many cases the new life will prove so agreeable that the patient will adopt it permanently. W. F. W.]

CURABILITY OF LOCOMOTOR ATAXIA.

WILL you kindly inform me, through the columns of your valuable paper, about what percentage of "Locomotor Ataxia" in your opinion are curable. Has medical science made much advancement in the last twenty years in the cure of this malady? W. M. DAVIDSON.

390 NORTH STATE STREET, CHICAGO, ILL.

[We are justified in classing locomotor ataxy amongst the incurable diseases. Some cases may recover in the early stages, but this is at a time when doubt may always attach to the diagnosis. Arrest and improvement can, however, be attained in probably the great majority of cases, and the intelligent application of means to this, and if it marks no "advancement in the cure," is positive progress in the treatment of the malady. There are few diseases in which the lesion, the course and the manifestations are more clearly established than in this, and hence few which can be more intelligently approached.

SAMUEL WOLFE, M.D.,

Prof. of Physiology and Diseases of the Nervous System in Medico-Chirurgical College, Philadelphia.]

[Nevertheless, there are cases in which the diagnosis has been made by skilful diagnosticians, in which an arrest of the disease, or even an apparent cure, has persisted for a number of years. It is begging the question to attribute these cases to "mistaken identity." If, as is claimed in France, ataxy is of syphilitic origin, there is no good reason why it should not be amenable to specific treatment. A case reported by the writer, in which he secured a cure, remains well after nearly eight years. W. F. W.]

Book Notices.

HIGHER EDUCATION IN INDIANA. By JAS. ALBERT WOODBURN, PH.D. Bureau of Education, Circular of Information, Nov. 1, 1891. Washington: Government Printing Office, 1891. Paper, 8vo; pp. 200.

THE PRACTICE OF HYPNOTIC SUGGESTION. Being an Elementary Hand-book for the Use of the Medical Profession. By GEORGE C. KINGSBURY, M.A., M.D. University of Dublin. Bristol, England: John Wright & Co.

This volume, the receipt of which we are glad to acknowledge, is intended "to acquaint its readers with the rudiments of practical therapeutic hypnosis," and to warn them of the obstacles in the way of its general adoption.

Among the many interesting facts in the book is the author's statement that "on a first trial, probably six out of ten average patients can be hypnotized, but that repeated trials will result generally in eight out of ten becoming hypnotized."

He finds that the prevalent idea that only persons of limited, or small mental or physical capacity, is a mistaken one, and that athletic persons and intellectual people with well-balanced minds, are often readily influenced.

In practice, he believes that it is clearly justifiable to use hypnotic suggestion in all cases where a distinctly nervous element can be detected, wherein it acts as a kind of mental or moral opiate, giving refreshing sleep and freedom from pain and anxiety.

Many cases are cited where patients have been cured of serious forms of disease by this suggestion, employed by the author, and he is completely convinced of its practical value. Even such deformity as traumatic contraction of fingers was treated in this way, a year after initial wound, and cured—to attest which photographs are printed.

Dr. Kingsbury's book is the first contribution to the therapeutics of hypnosis of any practical use that has come under our observation, and we are glad to recommend it to all who are investigating the subject.

W. F. H.

The Medical Digest.

A GENTLEMAN suffered with pain in the upper jaw, about where the root of the bicuspid had been. This resisted treatment, until the bone was opened, when a small piece of a tooth-root was found. This was removed, and the patient had no further difficulty.—*Western Dental Journal*.

IODOFORM INJECTIONS IN GOITRE.—Dr. Kapper, an Austrian military surgeon, has employed in fifteen cases, with invariable success, Mosetig's plan of injecting iodoform emulsion into soft thyroid tumors. In every instance there was a diminution in the circumference of the neck amounting to from 8 to 10 cm. Antiseptic precautions were employed, and in some cases where the tumor was of considerable dimensions several syringefuls were injected into different parts of the parenchyma. In order to ascertain whether the needle has entered the gland the patient is asked to swallow, when, if it has so entered, the downward movement of the syringe shows that the needle has been carried upward. In some cases the injections were repeated daily for several days, in others at intervals of a few days. In no cases were any untoward symptoms produced.—*Lancet*.

SMALL-POX AND VACCINATION IN CENTRAL AMERICA.—The *Gaceta Medica Quezalteca*, the first number of which has just reached us, states that in one of the recent epidemics of small-pox no less than 25,000 deaths occurred from the disease in the Republic of Guatemala; but that notwithstanding this terrible mortality, which is worse than that occasioned by war, the Government has taken no pains to introduce any scheme of vaccination, and the State is without any vaccination laws at all, being, indeed, as far as

sanitary organization is concerned, decidedly behind some other central American States, which, from its size and general importance, it ought at least to have equalled in scientific progress. A medical society has taken up the subject, but whether the Government can be induced to accede to its suggestions is very problematical.

THERAPEUTIC USE OF ORGANIC ANIMAL EXTRACTS.—At the recent meeting of the French Association for the Advancement of Science, Dr. Onimus, of Monaco, stated (*Sem. Méd.*) that he had used organic animal extracts of various kinds therapeutically with good results. Thus in a case of asystolism, he gave injections of cardiac muscle, which caused the disappearance of the suffocative attacks; the other symptoms, such as difficulty in walking, breathlessness, and general debility were improved by the injection of extracts obtained by macerating fragments of spinal marrow in glycerine. In a typical case of labio-glosso-laryngeal paralysis which had reached the last stage, the injection of extracts of nerve substance was followed by great improvement. In three cases of diseases of the cord—transverse myelitis, chronic meningitis, and incipient ataxia—definite amelioration ensued after similar treatment.

—*Brit. Med. Jour.*

ARTIFICIAL CORNEA.—The *Berlin Klin. Wochenschrift* publishes a seventh case of transplantation of cornea by Professor V. Hippel, of Königsberg. There was a dark-brown central decoloration of the cornea, three millimeters in diameter, and reaching down to the membrane of Descemet, which had been caused by the action of nitrate of silver. Cocaine having been applied, the non-transparent part of the cornea down to the membrane of Descemet was cut into by a little trephine, the crown of which was four millimeters in diameter, and carefully removed. The author then excised by the same means a similar piece from the whole thickness of the cornea in a young rabbit, and transplanted this to the eye of his patient. It filled the wound exactly, and was on a level with the rest of the cornea. Iodoform was applied, and both eyes were bandaged. Healing proceeded without any trouble, and in six weeks the patient was discharged with a completely transparent cornea.—*Lancet*.

EXCISION OF CHANCRE.—The bacteriological researches of Bouchard and Chauveau have demonstrated the fact that the intensity of an infection is (within limits) directly dependent on the number of pathogenic organisms. If, therefore, we remove the reservoir of infection by excising the chancre promptly, we are helping the organism in its struggle against the invader, and there is, at least, a theoretical possibility that the intensity of the infection will be mitigated. That this is actually the case, there is a considerable amount of evidence. At the Berlin Congress, Ehlers, of Copenhagen, reported thirty-seven excisions in which the patients had remained under observation for several years. In only 10 per cent. of these did severe forms of syphilis develop, whereas the proportion of cases of severe syphilis in general is about 35 per cent. Of 15 cases which Jullien operated upon, 3 showed absolutely no signs of syphilis later, and in a fourth the disease was so attenuated—if not wholly eradicated—that the patient acquired later a second syphilitic chancre. Leloir, in a recent paper, reports several cases in

which absence of all symptoms followed after excision of the chancre.

We are warranted, from these and similar cases which might be multiplied, as well as from purely theoretical considerations, in the conclusion that there is some probability that a syphilis may be aborted by the early excision of its initial lesion, and a considerable probability that its course will be rendered more benign.

The question is certainly not *res adjudicata*. What is needed in its present stage is more evidence. Altogether, 400 or 500 cases of excision have been reported. I have no doubt that two or three times that number of operations have been made that were never published. Most of these probably were made at the time this method of treatment was first generally discussed, and in the six or eight years that have elapsed sufficient time has been afforded for a judgment of the effect of the operation in the individual cases. Physicians who have notes of such excisions and their results would do much to effect a final settlement of the value of the operation by publishing them.—Pollitzer, *Med. Record*.

THE YEAST TREATMENT OF TYPHOID FEVER.—In *The Lancet* of April 18, 1891, I mentioned that yeast was being held up as a specific for the cure of enteric fever, and that some of the physicians at the Alfred Hospital, Melbourne, were experimenting with it. The report recently issued deals with thirty-seven cases treated by Drs. Embling, Lemprière, and Barclay Thomson. Dr. Thomson writes: "In all, thirty-seven cases have been treated: Ten were severe, the temperature reaching or exceeding 104°; eight moderately severe, temperature reaching or exceeding 103°; eleven were mild, although the temperature reached 103°; eight were very mild, the temperature never being above 102°. In all, recovery took place without any relapse. When commencing the use of the yeast, it occurred to me that if the theory that relapses are due to reinfection from the intestine is correct, then there should be none under the use of the yeast, as all the bacilli would be destroyed in the intestinal tube. This is so far borne out, for there was not a relapse in the thirty-seven cases under yeast; while in the 107 cases otherwise treated in the hospital there were sixteen relapses. The average proportion of relapses is given by Fagge as 2 to 11 per cent."—*Lancet*.

LYDSTON ON PERITONITIS.—1. I do not believe in the existence of acute idiopathic primary peritonitis.

2. The majority of cases of so-called idiopathic peritonitis in children will be found, upon inquiry, to be traumatic.

3. Slight injuries of the abdominal contents are relatively more dangerous in children than in adults.

4. Acute peritonitis in children, while apparently idiopathic, is often secondary to perityphlitic inflammation, which runs a rapid course, and extends to the general peritoneum without the intervention of appreciable local changes.

5. The profound prostration and cardiac inhibition characteristic of peritonitis are, in a great measure, incidental (1) to tension of the peritoneum produced by inflammatory products, with a consequent reflex inhibition of the heart, and (2) mechanical interference with the heart's action.

6. Surgical interference is indicated in all severe cases of general peritonitis and in cases of localized suppurative inflammation, or in cases of perityphlitic origin, whether due to foreign bodies or not.

7. There is every indication present for operation, and no logical objection to it. The operation is almost invariably palliative, if not curative.

8. Operation in no sense impairs the chances of recovery. *Per contra*, it enhances them to a great degree.

9. No case should be allowed to die without operation, unless already *in articulo mortis*.

10. It is not necessary to make a large incision, excepting in cases in which perityphlitic abscess is known to exist, which is rarely the case in children. If perityphlitic abscess exist, and is recognized before operation, the incision should be made at the most favorable point, which, in the majority of cases, is the typical line for ligation of the common iliac, as pointed out by Murphy and Lee. In by far the majority of cases in children, a simple median exploratory incision, with flushing of the abdominal cavity, is sufficient.—*Western Med. Reporter*.

A POISONOUS THIMBLE.—Among the numberless causes of blood-poisoning through the skin, one which was lately recorded is worth noting on account of its evident simplicity and the ease of its prevention. In the case referred to the sufferer was a seamstress, and the mischief resulted from her using a dirty metal thimble marked with verdigris, a little of which appears to have entered a scratch on the thimble finger. We can well believe that this accident was not the first of its kind. Verdigris, it is true, is a mere metallic irritant, and not comparable in virulence to most living germs of disease. It is quite enough, notwithstanding, to excite local inflammation, which friction, contact with dyed cloth material, or the entrance of dirt in any form, would quickly convert into a dangerous and general disorder. There is really no excuse for women who trust their fingers in these cheap and worse than useless articles. Steel thimbles are much safer and cost very little. Another variety also in common use is enameled within, and is, if possible, even freer from objection. Let us not forget to add a caution that cuts or scratches on the hand should never be neglected by sewing women so long as dyes continue to be used in cloth manufacture.—*Lancet*.

BROWN-SÉQUARD'S EXTRACT IN PHTHISIS.—Dr. M. K. Zieniec relates (*Berlin Klin. Wochenschr.*) five cases of phthisis treated with Brown Séquard's extract, injected subcutaneously. He was led to give this method a trial by the statements of certain writers, to the effect that they had employed the testicular extract in phthisis with good results. Dr. Zieniec made use of dog's testicles, on the presumption that it was advisable to select for this purpose an animal but slightly disposed to phthisis, and because the dog was the commonest example of the kind. The amount of emulsion injected was that contained in a Pravaz syringe; sometimes double this amount was given for a dose. Three of the patients were in an advanced stage of the disease; in the other two it was more recent though well marked. The first two cases received each five injections, each consisting of one syringe of fluid administered at intervals of a day or two. After injection a slight rise of temperature was observed. In the first case increase in fullness of the pulse was observed, and in both cases sleep improved, the cough diminished in severity, and the general condition became better. The patients, however, ere long relapsed into their former condition. The third patient also received five injections at intervals of a day or two; on the

last occasion twice the ordinary amount (one syringe-ful) was given. In this case, besides an evident improvement in the general condition—diminution of cough and, in consequence, undisturbed sleep—it was observed that the muscular power of the right hand had much increased. But, although the increase was marked after the first injection, after the following injections it was but slight; in fact, the nervo-muscular apparatus appeared to have been stimulated in the manner described by Brown-Séquard. No permanent benefit accrued in this case. In the fourth case similar observations were made in regard to sleep and cough; the pulse also was stronger, and the heart sounds were stronger and clearer after injection. This, however, was accompanied by fever, as a result of which a loss of weight was noticed. The fifth patient received ten injections; apart from improvement in sleep nothing noteworthy was observed, except that no rise of temperature followed injection. The author refrained from a more extensive investigation, seeing no further interest in the subject.—*Brit. Med. Jour.*

DR. PAUL GIBIER, Director of the New York Pasteur Institute, makes the following report of the results of the preventive inoculations against hydrophobia performed at his Institute during the first six months of the second year of its existence (February 18, 1891, to August 18, 1891). During this time 415 persons having been bitten by dogs, cats, and other animals applied for treatment. These patients may be divided in two categories:

1. In the case of 345 of these persons it was demonstrated that the animals attacking them were not mad. Consequently the patients were sent back after having had their wounds attended to during the proper length of time.

2. In 70 cases the anti-hydrophobic treatment was applied; hydrophobia of the animals inflicting bites having been evidenced clinically, or by inoculation at the laboratory, and, in many cases, by the death of some other persons or animals bitten by the same dogs.

Indigents have been treated free of charge.

The persons treated were:

17 from New York.	I from North Carolina.
16 " New Jersey.	I " Michigan.
11 " Massachusetts.	I " Pennsylvania.
5 " South Carolina.	I " Rhode Island.
5 " Texas.	I " Arkansas.
3 " Connecticut.	I " Virginia.
2 " Maryland.	I " Mexico.
2 " Missouri.	I " West Indies (Cura- goa).
1 " Ohio.	

Deaths by Hydrophobia After Treatment.—Miram Adams, five years old, of South Framingham, Mass. Badly bitten July 14 last, in nineteen places by a dog recognized to be mad. Treated from July 15 to August 1. Symptoms of hydrophobia appeared six days later (August 6). Died August 9.

Three other persons (two sisters of the patient) and a man, bitten by the same dog, who received the same course of treatment, are now enjoying good health.

This, so far, is the only death by hydrophobia out of the 255 cases treated at this Institute to date.

POSTICUS PARALYSIS IN INFANTS.—From the character of the laryngeal symptoms in these cases, bilateral impairment of the postici muscles suggests itself.

The power to cough, the comparatively clear voice retained, the length of time over which the disease

extends, and the deepening of symptoms as that goes on, differentiates the condition from affections of the abductors—for example, spasm of the glottis. These same qualities equally disprove the existence of papillomata in any of the cases referred to this condition; for in papillomata it is recognized that there is very frequently alteration of voice. In none of the cases was there noticed evidence of cervical or thoracic tumor or any pressure on the vagi or recurrents. Diphtheria was carefully eliminated in each case.

Etiology.—In considering this aspect of the disorder, reference must be drawn to the generally associated diseased states of the post-nasum and pharynx, and the age of the cases at which it is most exclusively met with. Looking at the pronounced symptoms in this condition, it would seem that the only probable explanation of the phenomena is to suppose a bilateral adductor paralysis, and that the subsequent gradually increasing severity of the symptoms where the condition has been in existence for some time is to be attributed to “secondary contracture” of the adductors—a common enough phenomenon in nervous pathology.

Irritation in the regions of the post-nasum, pharynx, etc., is probably transmitted to the medulla, there exciting and exhausting the accessory nucleus, and thus leading to depraved innervation of the muscles in question.

Collateral catarrh of the mucosa covering the postici muscles may also act injuriously on these structures.

Treatment.—From the foregoing indications, treatment on the proper lines must be rigorously carried out, in order that the child may be rescued before secondary contraction sets in, which demands more serious steps to be taken. In the earlier cases met with, I usually prescribed ammonium bromide, tepid sponging, etc., but of late I have treated more rigorously the post-nasal and pharyngeal conditions, and with the best results. Where granulations are felt in the post-nasum, these are crushed or otherwise destroyed. In a severe case, I should at once intubate; because, apart from the relief to respiration for the time being, the insertion of the tube seems to have a rousing effect on the general musculature of the larynx. It seems to dissipate any secondary contraction that may have supervened during the course of the malady, if this has existed long enough to allow of secondary contracture of the constrictors to have taken place.—Robertson, in *The Satellite*.

PRELIMINARY DRILL FOR LARYNGOSCOPY.—Apart from the unwillingness of the patient there is often an utter inaptitude to understand what the doctor requires. To many people it is most difficult to inspire and expire or phonate to order. In such cases I often find that much time is saved by a little patient instruction in carrying out the instructions,—“breathe gently in and out,” “say hah!” “draw breath.” This having been overcome, the larynx may be seen for a moment—and I must reiterate the well-worn statement that the early laryngoscopic examination should be of the briefest possible duration, though repeated several times. In point of fact, it is a good rule on the first introduction of the mirror merely to insert it for a moment into the back of the mouth, and then to remove it without having necessarily made any serious attempt to see the larynx, but *on no account to appear to the patient disappointed at not having done so*. The examination can usually be accomplished easily and confidently on a second introduction.

We find in the “Rules” that the examination of the interior of the larynx is much facilitated by the patient uttering a note in the “falsetto” (*sit venia verbo!*) “head,” or “thin” register. Now the difficulty is to get an untutored patient to do this. Vocalists do it without difficulty, and many adaptable patients can do it by imitation. There is no question in my mind that the power of communicating this accomplishment to the patient is of unspeakable value to the laryngoscopist, and well worth the trouble of acquiring. If the patient can be got to utter the sound “heh” to a head-note, the knot of the difficulty is generally cut. This sound is not familiar to the English throat; it is like the vowel of the word “hell” long-drawn out, the “meh” of the sheep, the “ê” of the French “*bête*”, or the Scotch exclamation of surprise “Eh!” During the utterance of this sound the larynx is raised into a more favorable position for inspection than when the vowel “ah” is produced, and the mouth is not closed to such an extent as during the emission of the sounds “ay” or “ee.” I should advise those “who have not had the advantage of being born north of the Tweed” to acquire the art of pronouncing this vowel.

This being pre-supposed, it remains to get the note uttered on the “head” (“thin”) register, and this is really the *crux* of the “preliminary drill.” Those who cannot hit off a falsetto note at once may succeed if they commence singing a scale as softly as possible. At a certain stage they will notice the character of the tones alter, and the sense of effort at production becomes less. They will find themselves using the “thin” register. One method then is to make the patient sing the vowel “eh” very softly up the scale, and when he has reached the “thin” register to make him halt, sing several times the note required, and, finally, to emit it “with a will” when the mirror is introduced.

There is yet another method of “dodging” a patient into the use of the “head voice.” Patients who are insusceptible to musical methods may succeed in producing a head-note by imitating a little girl calling to her kitten, “Puss, puss, puss” on a very high-pitched note. Others may pick up the comic singer’s method of testing his head-register by trying to reproduce the voice of an irate woman, shouting “Eliza-ah!” the last syllable being pronounced on a high falsetto note. The grotesque effect of this proceeding is very “catchy” and often overcomes the difficulty, the transition to the sound “eh” being easy when once the patient has caught the idea.

I may be met finally with the objection that in cases of destruction of the vocal cords and other conditions the productions of the sounds described may be impossible. The reply to this is that it is not so much the actual production of the sound as the attempt to do so that is required.

To those whose earlier or isolated attempts at laryngoscopy have been attended with difficulty, I offer these suggestions with the sympathy and best wishes of a somewhat “old hand.” To those “heaven-born” laryngoscopists who have never experienced any difficulty, I offer my humble and admiring congratulations.—Dundas Grant, *Jour. Laryngology*.

POLYCLINIQUE LIBRE DE BRUXELLES, 40, RUE DE RUYSBROECK.—Les cliniques spéciales inaugurées dans le courant de l’été 1891 seront reprises le mercredi, 4 Novembre prochain, et continuées les mercredi et samedi de chaque semaine.

Ces cours, *essentiellement pratiques*, permettent aux praticiens l'étude ou la revision rapide de différentes branches de la médecine.

Ils auront une durée de deux mois et demi, et seront repris trois fois par an : en Novembre, en Janvier et en Avril.

On est prié de se faire inscrire à la Polyclinique tous les jours, de 9 à 10 heures, ou par correspondance.

PROGRAMME DES COURS DU TRIMESTRE D'HIVER (1891).

Mercredi :	Samedi :
9 à 10.—Chirurgie infantile. Orthoédie. Dr. Hendrix.	9 à 10.—Opérations gynécologiques (à l'Institut gynécologique, 12, rue Puits-St-Guidon, à Anderlecht).
10 à 11.—Maladies de l'oreille, du nez, de la gorge. Dr. Hicquet.	Dr. C. Jacobs.
11 à 12.—Démonstrations microscopiques et diagnostic d'anatomie pathologique spéciale (maladies des femmes). Drs. Popelin et Cittadini (assistants.)	11 à 12.—Maladies nerveuses. Électrothérapie. Dr. Glorieux.
2 à 4.—Maladies des femmes. Dr. C. Jacobs, agrégé à la Faculté.	2 à 4.—Maladies de la peau. Dr. Dubois-Havenith, agrégé, à la Faculté.
	4 à 5.—Maladies des voies urinaires. Endoscopie. Cystoscopie. Dr. J. Verhoogen.

FRENCH NOTES.

A. E. ROUSSEL, M. D.

TREATMENT OF SYPHILIS—DANGERS AND INCONVENIENCES OF MERCURY.—In a clinical lecture delivered at the St. Louis Hospital, Dr. Fournier recalls the fact that the treatment of syphilis comprises the three following indications :

1. The administration of specifics to the poison.
 2. Auxilliary medications destined to combat the pathological conditions, anæmia, scrofula, rheumatism.
 3. An appropriate hygiene.
- Notwithstanding that the first of these indications is very important, the others should not be neglected. Apropos of the employment of specifics, Professor Fournier propounds this question : Is mercury, even when given in therapeutic doses, always inoffensive ? No ; mercury may be dangerous, and its onward effects may be ranged under four heads : ptyalism, eruptive effects, gastro-intestinal troubles, nutritive troubles.

In order to avoid stomatitis, we must evidently not exceed certain doses. The special means to avoid salivation are four in number :

1. Examine the mouth before the treatment, and, if necessary, have the patient submit to the dentist's care.
2. Carefully watch the condition of the mouth, and minutely inspect the retro-molar regions. Severe buccal hygiene, cleanliness of teeth, gargarisms.
3. Warn the patient of the possibility of buccal irritation by the mercury, in order that he may arrest the treatment in time.
4. Suspend the treatment at the first alarm.

Mercurial eruptions consist particularly of an erythema, produced by the usage of pomades, more rarely by internal treatment. They are excessively rare and are generally accidents of idiosyncrasy. To avoid the gastric and intestinal troubles, we must vary the preparations, proportion the doses according to the tolerance of the patients, and associate opium

with the mercury to insure tolerance. We should not exceed five or six weeks of treatment. If we have to deal with stomachs that absolutely refuse to support the medicament, we will have recourse to inunctions.

The nutritive troubles are much more serious. Mercury determines chloro-anæmia or marasmus under two circumstances :

1. When administered in too large doses, in a manner to fatigue the digestive tube, and to cause diarrhœa.
 2. When administered for too prolonged a period.
- The treatment should often be interrupted. But these accidents are the exception. When the mercurial treatment is well directed the patient experiences marked benefit. The blood globules increase in number, as demonstrated by Hayem, Keys ; the patients increase in weight ; certain dyspepsias improve, probably as the result of the anti-fermentative action of the mercury. If, therefore, the employment of mercury offers certain dangers, they are easy to avoid by following the rules which have been formulated.

—*Revue de Thérapeutique.*

LESIONS OF THE HEART IN INTERMITTENT FEVER (Dr. Sicard).—In the first degree the patients complain at the end of an excess of fever, of palpitations, dyspnœa, of divers malaises, with a sensation of thoracic constriction. Notwithstanding the frequency and inequality of the cardiac pulsations, we do not find any abnormal sounds.

The second degree is characterized by a permanent dyspnœa, weakness, thoracic constriction, attacks of palpitation and acute pain in the cardiac region. The sounds are greatly accentuated, but there is no murmur ; there is occasionally noticed a thrill on palpitation.

The third degree is noted by the apparition of an organic affection which consists either in a simple hypertrophy without valvular lesions, or of a valvular lesion without hypertrophy. In the latter case we have an aortic narrowing of an insufficiency of the auricular and ventricular valves.

Of fifty-seven observations collected by Ranzier in a single year, he noted these cardiac symptoms in seventeen cases.—*Revue de Thérapeutique.*

TREATMENT OF TUBERCULOSIS BY SUBCUTANEOUS INJECTIONS OF ARISTOL (Nadaud).—The author having successfully employed aristol as a dressing for a tuberculous wound, determined to utilize it in the form of subcutaneous injections. The form is as follows :

R.—Aristol..... I c. c.
Oil of sweet almonds (sterilized)..... 100.

Dose.—One cubic centimeter a day by subcutaneous injection.

Twenty-three patients were treated exclusively by this method. In seven cases the amelioration was such that the patients may be considered as cured. Duration of treatment twenty-five to thirty days. No accidents occurred.—*La Médecine Moderne.*

RECTAL INJECTIONS OF MINERAL WATER IN CHRONIC DIARRHŒA (Polaczek).—The author uses for this purpose Carlsbad water (32° to 42° C.) which he injects into the rectum in amounts of 200 to 250 grammes, at first once, and afterwards twice daily. Chronic diarrhœa is rapidly cured by this treatment.

THE TREATMENT OF CRAMPS OF THE LEGS IN PREGNANT WOMEN.—Administer at bedtime five milligrammes of sulphate of copper. This can be administered every night without inconvenience.—*La Gazette Médicale.*

TREATMENT OF INCONTINENCE OF URINE IN THE FEMALE.—Saenger recommends a sort of massage of the urethra and sphincter with an aseptic female sound. Once introduced we move it in a downward direction; then toward the sides in such a way as to encounter the elastic resistance of the muscular fibers. We thus produce a sort of dilatation, but we should be careful not to overcome the sphincter but only to excite it to action. It is, therefore, a massage rather than a dilatation.—*Gazette de Gynécologie*.

SUDDEN DEATHS: THE MOST FREQUENT CAUSES.—We are always astonished to notice how frequently physicians called upon to sign a death certificate in cases of sudden decease give as a cause, *foudroyante apoplexy, rupture of an aneurism*.

Cerebral apoplexy rarely causes sudden death and aneurisms only in the proportion of 5 per hundred, as proved by the statistics of Wynn Westcott, of London.

Of one thousand inquests noted by him, if we eliminate deaths caused by accidents, murders and suicides, and those of children under twelve years of age, there remains three hundred and three cases of sudden death. One hundred and eighty-five among the male sex and one hundred and eighteen among females. In one-third of the cases sudden death should be attributed to alcoholic excesses.

Westcott divides the causes into three classes:

1. The *syncopes*, 210 cases—15 ruptures of aortic aneurisms, 4 ruptures of the heart, 20 cases of valvular lesions of the heart, 3 cases of cardiac dilatation, 77 fatty degeneration of the heart, 10 hemoptysis, 3 hematemesis, 2 metorrhagia, 2 emboli, 3 perforations of the stomach or of the intestine, 2 cases of angina pectoris, 3 of *delirium tremens*, etc.

2. *Coma* 64—of which 20 were due to alcohol.

3. *Asphyxia* 29—œdema of the glottis, croup, convulsions, etc.—*La Médecine Moderne*.

Medical News and Miscellany.

DR. S. DICKSON BARR has removed to 1419 Walnut street, Philadelphia.

DR. T. D. MYERS has removed his office to his residence, 1703 Locust street, Philadelphia.

DR. A. E. FROMM, of Chicago, was fined \$25 for failing to report a diphtheria case on Wentworth avenue.

Emperor William has appointed Prof. Helmholtz, the eminent physiologist, a member of the privy council.

WANTED.—Copies of THE TIMES AND REGISTER for September 27 and November 22, 1890, and January 17 and February 28, 1891. A liberal price will be paid.

DR. JOHN E. OWEN, the Medical Director of the Columbian Exposition, has promised the President of the Board of Lady Managers that women shall receive official recognition upon his staff.

JUDGE B. K. HIGGINBOTHAM, of Frankfort, Ind., died very suddenly, on the morning of the 19th inst., at Plainfield. While the telegram announcing his death gave no particulars, it is supposed that it was due to his physical inability to stand the bichloride of gold treatment of the Keeley Institute, in which he had placed himself for a cure of the drink habit.

—*Chicago Daily News*.

It is said that Mr. Murphy, the United States Special Agent, is meeting with considerable success in his efforts to introduce corn into Germany. If the corn were to be liquefied, it would flow more readily into the new channels.

DR. EDWARD BEDLOE, United States Consul at Amoy, China, who has been an active promoter of the interests of the World's Fair, writes to Chie Handy that, in all English-speaking circles in China, there is a great and growing interest in the Chicago Exposition. In addition to other work, he has secured promises from eight friends to send on their private collections of curios and bric-a-brac in 1893, and hopes to obtain most interesting collections from Amoy and from Formosa.

A CORRESPONDENT of the *Washington Star*, who has been studying the subject of getting rid of fleas, gives this as the result of his investigations: If those who are troubled with this insect will place the common adhesive fly-paper on the floors of the rooms infested, with a small piece of fresh meat in the center of each sheet, they will find that the fleas will jump toward the meat and adhere to the paper. I completely rid a badly infested house in two nights by this means.

DR. L. WEBSTER FOX is of opinion that savage races possess the perception of color to a greater degree than do civilized races. After examining 100 Indian boys, Dr. Fox found no case of color blindness. In the same number of white boys at least 5 cases would have been discovered. Some years ago 250 Indian boys were examined, and only 2 cases of color blindness were met with, a very low percentage when compared with the whites. Among the Indian girls he did not find any. Among whites 2 females in every 1,000 are color blind.

THE Pennsylvania company has a large corps of surgeons in its employ, constantly ready with their services in case of accident on the road, and on October 20, about twenty-five of them held their ninth annual meeting at the Grand Pacific Hotel, Chicago. Officers were elected as follows: J. J. Buchanan, of Pittsburg, President; Dr. Foster, Washington, Vice-President, and S. B. Post, Canton, Ohio, Secretary and Treasurer. The following were selected as an executive committee: A. W. Ridenour, Massillon, Ohio; J. B. Murdock, Pittsburg, and J. J. Larkin, South Chicago. Half a dozen papers of improved methods in surgery were read.

POLYCLINIC EVENING LECTURES.—The Faculty of the Philadelphia Polyclinic delivers two evening lectures a week, at 8 o'clock, during the course of 1891-92. The following lectures are announced:

October 27. Dr. C. K. Mills, "Aphasias, and How to Study and Treat Them."

October 30. Dr. G. Betton Massey, "Some Everyday Experiences in Electro-gynecology."

November 3. Dr. Edward Jackson, "Shadow Test."

November 6. Dr. B. F. Baer, "A Plea for Early Diagnosis."

November 10. Dr. Edward Jackson, "Shadow Test."

November 13. Dr. B. F. Baer, "The Treatment of Retro-displacements."

November 17. Dr. T. S. K. Morton, "Appendicitis."

November 20. Dr. R. W. Seiss, "Treatment of Aural Pain."

VAN HOUTEN & ZOOM, the manufacturers of cocoa at Weesp, Holland, have set apart \$100,000 with which to make a splendid exhibit at the Exposition in Chicago, in 1893. They intend to erect a large building in the style of old Holland architecture of the fifteenth century, and to put in it, besides an exhibit in their own line of business, paintings, views, bric-a-brac, etc., illustrative of the Netherlands, and the life and characteristics of the Dutch people. They will have there a "cocoa school," where Dutch maidens, clad in picturesque native attire, will make delicious cocoa beverages according to the most approved methods, and will serve it to visitors.

WEEKLY Report of Interments in Philadelphia, from October 17 to October 24, 1891 :

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess.....	1	1	Fever, typhoid.....	3	1
Anæmia.....	1	2	Homicide.....	1	1
Apoplexy.....	9	1	Inanition.....	1	8
Asthma.....	2	1	Inflammation bladder.....	1	5
Aneurism of the aorta.....	1	1	" brain.....	6	5
Bright's disease.....	11	1	" bronchi.....	3	4
Burns and scalds.....	2	2	" kidneys.....	1	2
Cancer.....	19	3	" larynx.....	1	2
Casualties.....	5	3	" liver.....	2	6
Congestion of the brain.....	1	4	" lungs.....	8	1
" lungs.....	2	1	" heart.....	4	6
Congestive chill.....	1	2	" peritoneum.....	4	6
Chorea.....	16	1	" s. & bowels.....	1	1
Cholera infantum.....	5	1	Locomotor ataxia.....	1	1
Cirrhosis of the liver.....	1	1	Malformation.....	1	16
Collapse of lungs.....	50	6	Marasmus.....	1	1
Consumption of the lungs.....	1	9	Measles.....	11	5
" bowels.....	1	9	Neuralgia of the heart.....	1	1
Convulsions.....	1	11	Old age.....	1	5
" puerperal.....	1	1	Paralysis.....	1	1
Caries of spine.....	11	1	Rheumatism.....	1	1
Croup.....	1	1	Shock.....	1	1
Cyanosis.....	3	1	Sclerosis.....	1	1
Debility.....	2	1	Scrofula.....	1	1
Diabetes.....	3	1	Septicæmia.....	1	1
Diarrhœa.....	2	1	Sore mouth.....	1	1
Diphtheria.....	37	1	Softening of the brain.....	1	1
Disease of the heart.....	25	7	Suffocation.....	1	1
" kidneys.....	1	4	Suicide.....	4	2
Drowned.....	1	1	Tabes Mesenterica.....	1	1
Dropsy of the brain.....	2	1	Tetanus.....	1	1
Dysentery.....	2	1	Tumor.....	1	1
Erysipelas.....	2	1	Ulceration of the bowels.....	2	8
Enlargement of the heart.....	4	1	Uræmia.....	1	1
Fatty degeneration of the heart.....	3	1	Whooping cough.....	1	1
Fever, malarial.....	5	1	Total.....	230	177
" scarlet.....	1	1			

ELECTRICITY IN HYDROCELE.—A. C. S. has been suffering from a very large left hydrocele for two years. He says that he had, first, orchitis, and subsequently the fluid gradually accumulated in the sac. The fluid, about a pint, was drawn off by an ordinary hydrocele trocar and canula; and when the sac was empty, an insulated platinum probe attached to the negative pole of the battery was passed through the canula and freely applied to nearly the whole of the inner surface of the sac with a current of about 4 milliamperes for about three minutes, the positive pole being placed over the left groin. There was some smarting pain, and a little sanious discharge through the canula during the operation. The patient had slight fever and swelling of the scrotum on the third day; the fever completely subsided after three days, but the swelling took about a month to disappear. The operation was performed on the 14th of February, and when he left the station, on the 10th of April, he was completely cured of the hydrocele, and the left testis, which was a little larger than the right one, was also reduced to normal size. Four other cases have been treated according to the above method, and three of them turned out successful.

—Nundo Hall Ghose, in *Indian Med. Gazette*.

THE HOSPITALS OF PHILADELPHIA.

CHILDREN'S HOSPITAL.

LOCATION: 207 South Twenty-second street. Age: Thirty-five years. Patients received: Acute and chronic cases, children only. Patients not received: Contagious cases. Terms per week: Free. Actual cost per week per patient: \$6. Visiting hours: Monday and Thursday, 2 to 4.30 P. M. Resident physicians: Male, 2; female, none; how appointed, by examination; term of service, twelve months; pay, none. Nurses: Male, none; female, 10; pay, \$15 per month; term of service, permanent; training school, no; kind of nursing taught, nursing of children; diploma or certificate awarded, none. No special facilities for massage, electricity, or hydrotherapy. Clinics: Kind, medical and surgical; number, 2 per week; day, Wednesday; hours, 10 A. M. to 12 M.; duration, October 1 to March 1. Instruction for students: Clinics, as stated; ward classes, none; terms, free. Maternity cases not taken. Dispensary work: Charge, nominal for medicine; departments, medical, 11 A. M. to 12 M., and 4 to 5.30 P. M.—surgical, 11 A. M. to 12.30 P. M., Tuesday and Friday, 11 A. M.—eye, Tuesday, Thursday, and Saturday, 2 P. M.; average number of patients, 1,000 per month; average number of prescriptions, about 1,500. Names of physicians of hospital.—Dispensary physicians and surgeons: Drs. Morris J. Lewis, Walter D. Green, J. Madison Taylor, Charles Wirgman, W. E. Hughes, D. J. M. Miller, John Gillespie, Jr., Edward Martin, T. Hewson Bradford, G. G. Davis, W. Zentmayer, J. P. Crozer Griffith. Remarks: Hospital has one ambulance, a special ward for tracheotomy, and a convalescent branch in the country.

CHILDREN'S HOMŒOPATHIC HOSPITAL.

Location: 914 North Broad street. Age: Fourteen years. Number of beds, 50; wards, 3. Patients received: Acute cases, chronic cases with acute symptoms, under twenty-one years of age. Patients not received: Contagious and venereal cases, and alcoholism. Terms per week: \$1 to \$3 (mostly charitable). Beds all free. Visiting hours: Tuesday and Friday, 2 to 5 P. M. Resident physicians: Male, 2; female, none; how appointed, by examination; term of service, one year; pay, \$50 for junior, \$100 for senior. Nurses: Male, none; female, 3; term of service, permanent; training school, no; kind of nursing taught, children; diploma or certificate awarded, none. No special facilities for massage, electricity, or hydrotherapy. No clinics. No instruction for students. Maternity cases not taken. Dispensary work: Charge, free; departments, medical and surgical, daily, 11 A. M.—gynecological, Tuesday, 11 A. M.—dental, Monday, 11 A. M.—skin, Tuesday and Friday, 11 A. M.—ear, nose, and throat, Monday, Wednesday, and Saturday, 11 A. M.—eye, Tuesday and Friday, 2 P. M.; average number of patients, 1,000 (visits); average number of prescriptions, about 1,200. Names of physicians of hospital.—Medical Board: Bushrod W. James, M.D., President; J. W. Giles, M.D., Vice-President; Landreth W. Thompson, M.D., Secretary; Drs. J. R. Earhart, Jacob Frishmuth, Joseph M. Reeves, J. C. Millen, George W. Gardiner, Wm. S. Morris, James H. Closson, E. R. Snader, Frederic W. Messerve, Albert A. Norris, John D. Ward, E. L. Oatley; Consulting Staff: Drs. James Kitchen, C. Neidhard, T. C.

Williams, Aug. Korndorfer, Mahlon M. Walker; Consulting Surgeons: Drs. John E. James, Charles M. Thomas; Consulting Gynecologist: B. Frank Betts, M.D.; Externe Physicians: Drs. Theodore P. Gittens, Robert S. Summers; Matron: Mrs. M. R. Barber. Out-patient Department and Polyclinic.—Surgeons: Drs. J. W. Giles, Frederic W. Messerve; Diseases of the Ear, Throat, and Nose: Wm. S. Morris, M.D.; Diseases of the Eye: Bushrod W. James, M.D.; Diseases of the Skin: Albert A. Norris, M.D.; Diseases of Women: Joseph M. Reeves, M.D.; Diseases of Heart and Lungs, E. R. Snader, M.D.; Diseases of the Nervous System: John D. Ward, M.D.; Pathologist: E. L. Oatley, M.D.; Dental Clinic: F. Morton Long, M.D., D.D.S. Remarks: Hospital has ambulance, and isolation ward.

GERMANTOWN HOSPITAL AND DISPENSARY.

Location: Penn and Chew streets, Germantown. Age: Hospital, twelve years; dispensary, twenty-seven years. Number of beds, 50; wards, 2, and 5 special. Patients received: Acute cases, chronic cases occasionally, adults and children. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: Free. Actual cost per week per patient: \$12 50. Visiting hours: Monday, Wednesday, and Friday, 4 to 5 P. M. Resident physicians: Male, 2; female, none; how appointed, by election; term of service, one year; pay, none. Nurses: Male, 2; female, 5; training school starting; kind of nursing taught, general. No special facilities for massage, electricity, or hydrotherapy. No instruction for students. Maternity cases not taken (treated at home). Dispensary work: Charge, free; departments, medical, surgical, and gynecological, Monday, Wednesday, Thursday, and Friday, 10 A. M. to 12 M.—eye, Tuesday and Saturday, 10 A. M. to 12 M.—ear, nose, and throat, Tuesday and Saturday, 3.30 to 5 P. M.; average number of patients, 400 (visits), 198 (new) per month. Names of physicians of hospital.—Attending Physicians: Drs. Auguste F. Müller, Edw. F. Garrett, R. W. Deaver, Chas. A. Currie; Eye Department: Drs. George T. Lewis, L. Webster Fox; Throat, Nose, and Ear: S. MacCuen Smith, M.D.; Consulting Surgeons: Drs. D. Hayes Agnew, William Hunt; Consulting Physicians: Drs. James Darrach, William R. Dunton. Remarks: Acute cases admitted at all hours, others at 12 M.; hospital has ambulance, isolation ward, and is constructed upon the pavilion plan; supported by voluntary subscriptions only.

GYNECEAN HOSPITAL.

Location: 247 North Eighteenth street. Age: Three years. Number of beds, 40. Patients received: Acute and chronic cases, adults (only gynecological cases received). Patients not received: Contagious and venereal cases, alcoholism. Terms per week: A small sum if patient is able. Visiting hours: daily, 3 to 5 P. M. Nurses: Female, 5; pay, \$10 per month (first month probation); term of service, one year; training school, yes; kind of nursing taught, gynecology; diploma or certificate awarded, diploma. Maternity cases not taken. Dispensary work: Charge, none (medicine free). Average number of patients: 25 to 30 per week. Names of physicians of hospital.—Attending Surgeons: D. Hayes Agnew, M.D., L.L.D., Charles Kingham Penrose, M.D.; Consulting Physician: J. M. Da Costa, M.D.; Pathologist: Morris Longstreth, M.D.; Drs. W. D. Green, J. B. Shober, A. C. Wood, Martin Downs.

EPISCOPAL HOSPITAL.¹

Location: Front and Lehigh avenue. Age: Forty years. Number of beds, 200; wards, 6. Patients received: Acute, chronic, and venereal cases, adults and children. Patients not received: Contagious cases. Terms per week: \$7. Actual cost per week per patient: \$7 25. Beds all free. Visiting hours: Daily (except Sunday), 2 to 3 P. M. Resident physicians: Male, 6; female, none; how appointed, elected by managers; term of service, eighteen months; pay, none. Nurses: Male, 8; pay, \$10 to \$25 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. Facilities for massage, none; electricity, yes; hydrotherapy, limited. No clinics. No instruction for students. Maternity cases not taken. Dispensary work: Average number of patients, 1,663 per month (new cases); average number of prescriptions, 6,180 per month. Names of physicians of hospital.—Physicians: Drs. James M. Anders, D. J. Milton Miller, Caspar Morris, Henry M. Fisher; Surgeons: Drs. Thos. R. Neilson, J. H. C. Simes, Richard H. Harte, Wm. B. Hopkins; Ophthalmic and Aural Surgeons: Drs. Albert G. Heyl, G. Oram Ring. Dispensary Staff.—Physicians: Drs. Elliston J. Morris, A. K. Minich, Frederick A. Packard, B. B. Reath, Jr.; Surgeons: Drs. A. Hewson, G. G. Davis, H. C. Deaver, George M. Boyd.

GERMAN HOSPITAL.

Location: Corner Girard and Corinthian avenues. Age: Thirty-one years. Number of beds, 160; wards, 12, and 30 smaller rooms. Patients received: Acute cases, chronic cases under conditions and for limited periods, adults. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: \$6 (private rooms extra). Visiting hours: Tuesday and Thursday, 3 to 4 P. M. Resident physicians: Male, 3; female, none; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, 10; female, 30; pay, males only (female nurses are voluntary Protestant deaconesses); training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, none. Special facilities for massage, electricity, and hydrotherapy. Clinics: Medical, Tuesday and Friday, 11 A. M. to 1 P. M.—Surgical, Monday, Wednesday, and Saturday, 10 A. M. to 1 P. M.—gynecological, Wednesday and Saturday, 2 to 4 P. M.—eye, ear, nose, and throat, Tuesday and Friday, 2 to 4 P. M. Instruction for students: Clinics, as stated; ward classes, none; terms, free. Maternity cases not taken. Dispensary work: as stated under "Clinics." Names of physicians of hospital.—Physicians: Drs. A. Frau, L. Wolff, J. C. Wilson; Surgeons: Drs. J. B. Deaver, J. W. White, C. B. Penrose (all voluntary); Chief Resident: C. Frese (paid). Remarks: Hospital has two ambulances, special dead-house, disinfecting-house, and is lighted by electricity; patients are admitted from 9 A. M. to 12 M.—emergency cases any time; about one-half of the patients are free.

HOWARD HOSPITAL.

Location: 801 South Broad street. Age: Thirty-six years. Number of beds, 13. Patients received: Acute cases, (department for incurables not in operation), adults and children. Patients not received: Contagious cases. Terms per week: Free. Visiting hours: Daily, 3 to 5 P. M. Resident physicians: Male, 2; female, none; how appointed, by examination; term of service, one year; pay, none.

¹ The hospital of the Protestant Episcopal Church.

Nurses: Male, none; female, 4; pay, nominal; term of service, one year; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. Clinics: (see "Dispensary Work"). Maternity cases: At what time taken, two weeks before labor (also attended at homes); terms, free. Dispensary work: Charge, each prescription 5 cents; departments, medical, daily, 11 A. M. to 12.30 P. M.—surgical, daily, 10 to 11 A. M.—gynecological, daily, 11 A. M. to 12 M.—skin, Monday, Wednesday, and Friday, 12.30 to 1.30 P. M.—children, 9 A. M.—nervous, Tuesday and Friday, 11 A. M. to 12 M.—eye, Tuesday, Thursday, and Saturday, 2 P. M.—throat, ear, and nose, Tuesday, Thursday, and Saturday, 11 A. M. to 12 M. Names of physicians of hospital.—Medical Board, General Surgery and Orthopaedics: Drs. George McClellan, Edward Martin; General Medicine: Drs. John W. Barr, Charles Wirgman, Frederick M. Luther, J. P. Crozer Griffith; Diseases of Women: Drs. Henry Morris, Robert H. Hamill, T. Hewson Bradford, G. Betton Massey; Diseases of Children: Drs. William B. Atkinson, John M. Keating; Diseases of the Mind and Nervous System: Drs. Lewis Brinton, J. Madison Taylor; Diseases of the Eye: Drs. Franklin D. Castle, C. Jay Seltzer; Diseases of the Throat, Ear, and Nose: Drs. O. H. Koons, E. L. Vansant; Diseases of the Skin: Drs. H. W. Stelwagon, Arthur Van Harlingen.

HAHNEMANN HOSPITAL.

Location: Fifteenth street, above Race. Number of beds, 150. Patients received: Acute, chronic, and venereal cases, alcoholism, adults and children. Patients not received: Contagious cases. Terms per week: \$7. Number of free beds: 78. No special visiting hours. Resident physicians: Male, 4; female, none; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, 2; female, 26; pay, \$10 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, diploma. Facilities for massage (special man appointed); hydrotherapy, none. Clinics: Kind, medical, surgical, gynecological, eye, etc.; number, 6 per week; hours, 1 P. M. Instruction for students: Clinics, as stated; ward classes, at intervals; terms (see announcement of college). Maternity cases not taken. Dispensary work: Charges, none; departments, all diseases; hours, daily, 12 M. Remarks: Hospital has ambulance, special isolation ward, and all modern conveniences.

JEFFERSON HOSPITAL.

Location: Sansom street, between Tenth and Eleventh streets. Age: Sixty-seven years. Number of beds, 200. Patients received: Acute and venereal cases, alcoholism, adults and children. Patients not received: Contagious cases. Terms per week: \$7 in wards, \$25 in rooms. Visiting hours: Daily (except Sunday), 3 to 5 P. M. (private patients any hour). Resident physicians: Male, 5; female, none; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, 8; female, 15; pay, \$8 to \$25 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. Facilities for massage or hydrotherapy, no special; electricity, special. Clinics (see college announcement). Instruction for students (see college announcement). Maternity case: At what time

taken, a few weeks before labor. Dispensary work: Charge, small for medicine; departments, orthopaedic, Tuesday, Thursday, and Saturday, 12 M.—medical, daily, 11.30 A. M. to 1 P. M.—surgical, daily, 12 M. to 2 P. M.—eye, skin, throat and nose, women and children, daily, 12 M.—nervous, Monday, Wednesday, and Friday, 12 M.—ear, daily, 1 P. M. Names of physicians of hospital.—Dispensary, Medical: Chief, Edwin E. Graham, M.D.; Registrar, A. A. Eshner, M.D.; Assistants, Drs. Thos. G. Ashton, Chas. S. Hearn, C. D. Spivak, Noble B. Parvin, Bayard Murray, J. A. Irwin, E. W. Stevens, Paul Bartholow. Surgical: Chief, Orville Horwitz, M.D.; A. Hewson, M.D.; Assistants, Drs. J. Chalmers Da Costa, Wm. M. L. Coplin, Martin H. Williams, Henry D. Moore, Daniel W. Flemming, I. E. Bennett, Robert B. Judge, Rudolph Kindig, A. F. Tod, Wm. I. Miller, C. A. Veasey, H. J. Fiet. Obstetrical and Gynecological: Chief, E. P. Davis, M.D.; Electrician, J. M. Fisher, M.D.; Assistants, Drs. R. H. Dengler, Ludwig Loeb, E. C. Warg, W. H. Wells, H. D. Hazzard, H. J. Fiet. Ophthalmological: Chief, Howard F. Hansell, M.D.; Assistants, Drs. Thomas O. Nock, Jas. H. Bell, W. S. Powell, C. R. Casperson, Ross R. Bunting. Laryngological: Chief, Louis Jurist, M.D. Otological: Chief, S. MacCuen Smith, M.D.; Assistants, Drs. William S. Jones, G. Hudson Makuen, Jas. Thorington. Orthopaedic: Chief, J. P. Mann, M.D.; Assistants, Drs. T. W. Bortree, Robert Casperson. Dermatological: Assistants, Drs. J. Abbott Cantrell, Henry B. Nightingale, John Lindsay. Diseases of Children: J. N. Rhoads, M.D.; Assistants, Drs. Joseph Klapp, W. M. Capp, T. J. Bowes. Renal: Assistant, W. R. Wilson, M.D. Neurological and Electrical: Assistants, Drs. E. S. Lawrence, Burton W. Swayze.

JEWISH HOSPITAL.

Location: York road and Tabor street. Age: sixteen years. Number of beds, 52; wards, 4. Patients received: Acute, chronic, and venereal cases, adults and children. Patients not received: Contagious cases, alcoholism. Terms per week: Free (if able to pay, \$5 to \$10). Actual cost per week per patient: \$7. Number of free beds: All. Visiting hours: Daily, 1 to 4 P. M. Resident physicians: Male, 2; female, none; how appointed, by election; term of service, one year; pay, \$80 to \$150 per year. Nurses: Male, 4; female, 5; pay, \$15 to \$25 per month; term of service, optional. No special facilities for massage, electricity, or hydrotherapy. Clinics: Number, 2 daily; hours, 9 A. M. to 4 P. M. No special instruction for students. Names of physicians of hospital.—Drs. T. G. Morton, J. B. Roberts, L. W. Steinbach, Benjamin B. Wilson, O. J. Wister, Thomas Betts, A. Feldstein, S. Solis-Cohen, C. S. Turnbull. Remarks: Hospital has ambulance, and separate kitchen.

KENSINGTON HOSPITAL FOR WOMEN.

Location: 136 Diamond street. Age: Eight years. Number of beds, 21; wards, 3; rooms, 3. Patients received: Acute cases, adults only. Patients not received: Chronic, contagious, and venereal cases, alcoholism. Terms per week: \$5 to \$25 (also, free beds). Visiting hours: Tuesday and Friday, 2 to 5 P. M. No resident physicians. Nurses: Male, none; female, 3; term of service, one year; training school, yes; kind of nursing taught, gynecological; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. No clinics. No instruction for students. Maternity cases not

taken. Dispensary work: Departments not yet opened. Names of physicians of hospital.—Drs. Chas. P. Noble, Geo. M. Boyd; Clinical Assistants: Drs. H. H. Applebach, A. H. Deekens.

MATERNITY HOSPITAL.

Location: 734 South Tenth street. Number of beds, 21; wards, 4 delivery, 2 convalescent. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: \$3 to \$7. No visiting hours. Resident physician: Male, none; female, 1; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, none; female, 4; pay, none; term of service, three to six months; training school, yes; kind of nursing taught, obstetrical; diploma or certificate awarded, yes. No clinics. No instruction for students. Maternity cases: At what time taken, two weeks before labor. No dispensary work. Names of physicians of hospital.—Drs. W. H. Baker, Robert H. Hamill, Barton C. Hirst, Wm. R. Gordell. Remarks: No unmarried women admitted except for first confinement.

MUNICIPAL HOSPITAL FOR INFECTIOUS DISEASES.

Location: Twenty-second street and Lehigh avenue. Age: Twenty-six years. Number of beds, 150; wards, 9; rooms, 3. Patients received: Acute contagious diseases; male, female, and children. Terms per week, \$7. No visiting hours. No resident physician at present (appointed by the Board of Health). Nurses: Male, 1; female, 1. Name of physician of hospital.—Wm. M. Welch, M.D. Remarks: Hospital has two ambulances; clothing which is infected is destroyed, or, if disinfected, a small charge is made.

METHODIST EPISCOPAL HOSPITAL.

Location: Broad and Wolf streets. Number of beds, 70 (7 endowed). Hospital is not yet completed.

PHILADELPHIA ORTHOPÆDIC HOSPITAL; INFIRMARY FOR NERVOUS DISEASES.

Location: Seventeenth and Summer streets. Age: Twenty-three years. Patients received: Chronic cases, adults, children must be three years old. Patients not received: Contagious cases. Terms per week: \$10; rooms, \$15 to \$35 (washing and medicine extra). Visiting hours: Tuesday, Thursday, and Friday, 2 to 4 P. M. Resident physicians: Male, 2; female, none; how appointed, by election; term of service, one year; pay, none. Nurses: Male, none; female, 15; pay, \$5 to \$10; term of service, two years; training school, yes; kind of nursing taught, special; diploma or certificate awarded, yes. Facilities for massage, yes; electricity, special. Clinics (see "Dispensary"). Instruction for students: Clinics, yes; terms, free. Maternity cases not taken. Dispensary work: Departments, nervous, Monday, Wednesday, and Friday, 1 P. M.—old cases, Monday, Wednesday, and Friday, 2 P. M.—deformities, Tuesday, Thursday, and Saturday, 1 P. M. Average number of patients, 283 per month (last year). Names of physicians of hospital.—Attending Surgeons: Drs. Thomas G. Morton, H. Earnest Goodman, William W. Keen; Attending Physicians: Drs. S. Weir Mitchell, Wharton Sinkler, Morris J. Lewis; Consultants: Drs. D. Hayes Agnew, George R. Morehouse, William Hunt; Assistant Surgeons: Drs. G. G. Davis, Wm. Johnson Taylor; General Assistant Surgeon: Thomas S. K. Morton, M.D.; Assistant Physicians: Drs. J. Madison Taylor, Guy Hinsdale, John Kearsley Mitchell; General Assistant Physician: Francis X. Dercum,

M.D.; Resident Physician: Edgar Strayer, M.D.; Medical Electrician: I. Pearson Willitts, M.D.; Ophthalmologist: George E. de Schweinitz, M.D.; Gynecological Assistant: Barton C. Hirst, M.D.; Registrar: Frederick A. Packard, M.D.; Anæsthetizer: William H. Bricker, M.D. Remarks: Applicants must pay if able, and should apply for admission Monday, Wednesday, and Friday, at 1 P. M., for nervous diseases; Tuesday, Thursday, and Saturday for deformities.

PHILADELPHIA HOSPITAL, PHILADELPHIA ALMS-HOUSE.

Location: Thirty-fourth and Spruce streets. Age: One hundred and twenty years. Number of beds, 1,100 (about). Patients received: All diseases except contagious (special department for the insane). Terms per week: Free (if desired to pay, \$3.50 per week, about cost). Beds all free. Visiting hours: Tuesday, Thursday, and Saturday, P. M. (permit required). Resident physicians: Male, 20 (2 for insane); how appointed, by examination; term of service, hospital, fifteen months; pay, insane department, \$600. Nurses: Female, 100; pay, \$9 to \$15; term of service, six months to two years; training school, yes; kind of nursing taught, general; diploma or certificate awarded. Facilities for massage and hydrotherapy, none; electricity, special. Clinics: Kind, medical, surgical, and gynecological; number, 6 per week; days, Wednesday and Saturday; hours, 9 A. M. to 12 M. Instruction for students: Clinics, yes; ward classes, yes (conducted by attending physician); terms, free. Maternity cases: At what time taken, third month of pregnancy. No dispensary work. Names of physicians of hospital.—Chief Resident, Daniel E. Hughes, M.D.; Physicians: Drs. R. G. Curtin, James B. Walker, J. H. Musser, F. P. Henry, James Anders, W. E. Hughes, S. Solis-Cohen, Eugene Vansant; Surgeons: Drs. W. G. Porter, L. Steinbach, John B. Darer, Earnest Laplace, W. J. Hearn, A. W. Ransley, Orville Horwitz, James Barton; Obstetricians: Drs. Clara Marshall, E. E. Montgomery, E. P. Davis, Robert H. Hamill, Theophilus Parvin, Barton C. Hirst, W. C. Ashton, George McKelway; Neurologists: Drs. Charles K. Mills, Francis Dercum, Wharton Sinkler, J. Hendrie Lloyd; Ophthalmologists: Drs. George De Schweinitz, George M. Gould; Dermatologists: Drs. H. W. Stelwagon, J. A. Cantrell; Pathologist: Henry E. Formad, M.D.; Bacteriologist: E. O. Shakespeare, M.D.; Assistant Pathologists: Drs. J. L. Hatch, H. W. Cattel; Laryngologists: Drs. C. Jay Seltzer, George Marshall.

[CONCLUDED NEXT WEEK.]

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The Times and Register.

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Clinical Lectures.

CATARRHAL DYSPEPSIA.

By JAMES M. ANDERS, M.D.,

Professor of Theory and Practice of Medicine, Clinical Medicine and Hygiene at the Medico-Chirurgical College of Philadelphia.

THIS man, whom we have before us to-day, is twenty-six years old, and for the last two years has been a police officer. His father died from the effects of a gunshot wound. His mother is still living; she has dyspepsia, has also suffered from rheumatism and, of late, from eczema. The patient has always been well, except for slight colds, which have not been frequent. Two years ago he had la grippe, which laid him up for a week, but he made a good recovery. Fifteen months ago he was seized with belching of wind and sour eructations from the stomach, which condition rapidly grew worse and was accompanied, as a rule, with severe palpitation. This condition has continued until the present time. The patient started to drink spirits after entering his present occupation; frequently took a couple of drinks about 4 A. M. on an empty stomach. His bowels are habitually constipated; appetite fair. He is married, has three children, and for some months has had no desire for coition.

In addition to the symptoms enumerated, we find that he passed some mucus in his stools first, but not now; has also marked acidity (due to butyric and acetic acid fermentation); has lightness in the head and dizziness sometimes; has depression of spirits, and has lost twenty two pounds in weight.

Now when you get a history of this kind, always make a physical examination of your patient's stomach, to see whether there is any organic disease, or whether it is merely functional. Without such an examination you cannot make a diagnosis, as the

subjective symptoms sometimes mislead you. On examination I find that he has little or no tenderness, no distension. We must examine as to one other point, the tongue. From the condition of that organ I would say that this man is suffering from a mild form of catarrhal trouble. Whenever you have a catarrhal condition of the stomach, or bowels, you are almost certain to have a tongue with enlarged papillæ, and red tip and edges, as you notice in this case. This man is constipated and bilious, as you see from his complexion. The fact that his mother has rheumatism; that he has been a drinker for fifteen months; the irregularity in his meals; acidity and distress after meals; gaseous eructations, and the constancy of his symptoms, would indicate the catarrhal form of dyspepsia. You remember I asked him whether he had these symptoms continuously from day to day, or whether they continued for a short time, and were followed by remissions or absence of symptoms. You will frequently find, in the atonic form, that the symptoms occur at intervals, and that they are never quite so continuous as in the catarrhal form.

The points, then, on which to base the diagnosis of the catarrhal form of dyspepsia are: The constancy of the symptoms, as against the irregular manifestations of the functional form. Then we have the tongue furred as a rule in catarrhal dyspepsia, with red tip edges and *enlarged papillæ*. We have in catarrhal dyspepsia a great deal of acidity. In functional dyspepsia you are more apt to have eructations of gas, along with brackish water, though sometimes there is also more or less acidity. In cases of catarrhal dyspepsia, we sometimes have a great deal of thirst. This is not always present, however. There is also a great deal of headache, and the general health and strength are more affected in the catarrhal than in the atonic form. The loss of strength goes on continually

without any remissions, during which the system may recover itself. As to the physical signs, you generally get pain on pressure in catarrhal dyspepsia. In the low forms of catarrh, however, this symptom is sometimes absent. In functional dyspepsia there is no pain on pressure. Bear in mind that in making a diagnosis of functional dyspepsia, you pay special attention to the etiology of the case. A history of exhaustive discharges, neurasthenia, worry, anæmia, mental taxation, etc., points toward this form.

The diagnosis in these cases is highly important, from the fact that the treatment is widely different. In the functional form you must build up the strength of the patient, build up the nervous muscular elements of the stomach, and assist gastric secretion. In the catarrhal form the treatment is entirely different. First, rid the alimentary canal of all undigested matter, of all secretions, and then give the stomach as much rest as possible. In order to do that we place the patient on milk or liquid diet for a couple of weeks. If the patient says milk does not agree with him, it may be pancreatinized or peptonized, or it may be boiled. These patients, when they suffer from thirst, should have diluents. The best thing to use for this purpose is some sort of gum water or mucilaginous drink.

I should be in favor of giving this man instructions to restrict himself to liquids, animal broths and boiled milk, every two or three hours regularly. He shall also have sub-nitrate of bismuth, gr. x, and bi-carbonate of soda, gr. v, to overcome the acidity, combining with this five grains of pepsin. This powder to be taken before meals. Another highly important thing in catarrhal dyspepsia is to keep the bowels soluble, and the best preparations for this purpose are the salines: Rochelle or Carlsbad salts, giving a heaping teaspoonful of either, preferably in warm water, early in the morning. Salines should always be taken fasting, early in the morning. If a teaspoonful is not sufficient to produce an evacuation in two hours, increase the dose.

SPINA BIFIDA:—ITS TREATMENT.

By ERNEST LAPLACE, M. D.,

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SPINA BIFIDA is an undeveloped condition of the spinous processes and lamina of certain vertebræ. This arrested development generally takes place about the lower dorsal or lumbar region. At first there is no tumor that would indicate the presence of the spina bifida. The fluid tumor, which characterizes this condition, only makes its appearance when the hydrostatic pressure, extending from the top of the brain to the seat of the imperfect vertebræ, has been brought to bear upon the spot within the meningeal cavity unprotected by bone; hence, a bulging, due to cerebro-spinal fluid, only protected from the external air by one layer of dura mater and the skin. At first it is a comparatively simple condition; that is, a pure meningocele; later on, as the cyst enlarges, the cauda equina, or spinal cord, becomes detached and a part of its thickness engages in the cyst. This is then called a meningo-myoele. When the totality of the cord engages in the cyst, comprising the gray matter and medullary canal, we have a syringo-myoele.

It follows from the nature of the condition, that, if unsupported, the tendency of the cyst is to enlarge, and decreasing the thickness of its walls, it eventually

ruptures. The prognosis is thus always fatal if not relieved by operation.

There being no other alternative, it becomes of prime importance to consider the various modes of treatment, both palliative and radical. The results of treatment by later surgical methods, are much more encouraging than we have been led to suppose, and the following statistics will show that the strides of modern surgery will place the successful treatment of this sad condition among its newest achievements.

J. Morton, of London, reports 71 cases last year, in which he applied his treatment, which is about the same as what we would use in hydrocele for the purpose of exciting within it an inflammation.

He uses:

R.—Iodi.....	gr. x.
Potassii iodidi.....	gr. xx.
Glycerine.....	ʒj.

With a hypodermic syringe he draws out of the tumor ʒss. of its contents, and with another hypodermic syringe inserts into the tumor ʒss. of the above solution. Gradually a slight inflammation is excited in the sac, by which the walls are thickened and become stronger. These injections are repeated and the sac shrinks up in three or four weeks.

This method gives the following result: Of 71 cases operated upon, 35 recovered; of those that did not recover, 5 were simply not relieved; 4 were improved but never got well, and 27 died. Here let me say that the longer you defer treatment, the less are the chances of success. Now, of these 27 that died, the cause of death in 7 was meningitis. These might be eliminated, for with proper precautions meningitis could be prevented; 5 died of shock, that could not be avoided; 7 died of marasmus; these were probably run down before treatment was adopted. Hydrocephalus caused the death of 2 who already had hydrocephalic tendencies; 2 died of convulsions; 1 of diarrhœa, and the cause of death in 3 was doubtful. Therefore, you see that the treatment really is not so dangerous as it would seem.

Here is a summary of the other modes of treatment. Of 46 operated upon by simple aspiration, reported last February, 30 died. The next treatment was by ligation around the sac; of 16 so operated upon, 6 died. One that I operated upon three years ago by ligature got well; 23 were operated upon by excision of the tumor, and 7 died; simple injection of iodine was tried in 26 cases, of which 5 died.

We see that whatever be the irritating substance we inject, the chances are good, unless it travels upward and causes meningitis. As far as the danger of sepsis is concerned, we must say we are not clean when it occurs. So much for the so-called palliative treatment.

The man who seems to have met with the greatest success, is Robson, of London. He deals with these cases according to the methods of modern surgery as should be done in the case before us. Robson therefore excises the sac to a great extent, sews it up and approximates the muscles by buried sutures, thus giving a solid wall where before was a weak spot, and doing the same thing as in radical cure for hernia. Baird has operated on 20 such cases, with 16 recoveries, because he has applied the purest and best methods in surgery. Finally Zenenko, of Russia, operated on 30 cases, with 24 successes. These are the statistics up to date.

To-day we cannot rely on old statistics. If a man comes to me with statistics of twenty years ago, I'll none of them. We cannot compare an operation of

to-day to any operation on the same class of patients twenty-years ago.

I hope I have given you a more encouraging view of these cases than has been given by some others. When you realize the probability of death within six months on the one hand, and the fair chance of recovery after operation on the other hand, I hope you will see the advisability of operation.

The case now before you is a child six months old, in whom the mother discovered, a few days after its birth, a soft tumor over the lumbar region. This has gradually enlarged until it is now the size of an orange, translucent and covered with exceedingly thin skin. Our treatment will be that adopted by Robson. The child being anæsthetized, will be placed on its belly. We will make an incision, removing a part of the sac, then close the sac with buried sutures and sew the muscles of either side layer by layer, and finally approximate the skin.

This will be done with the strictest asepsis, and an aseptic dressing will be applied, to be removed only in eight days.

Original Articles.

TWO CASES OF FIBROID IN WHICH ELECTRICITY CEASED TO BE OF SERVICE, AND, IN FACT, WAS POSITIVELY INJURIOUS.¹

By HERMAN D. HAYD, M.D., M.R.C.S.,
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MR. PRESIDENT AND GENTLEMEN: At medical society meetings one usually listens to papers devoted to the successes of various operative and therapeutical measures; but I propose to report to you two cases, interesting alike from a clinical as well as a therapeutic standpoint; cases in which the manifestations of well-directed treatment were at first eminently satisfactory and promised a brilliant result. But finally the symptoms, which were at first so speedily relieved, were, by each subsequent treatment, dangerously aggravated. And what may seem paradoxical remedies, at first utterly futile and worthless, prove to be beneficial and finally bring about encouraging results.

Mrs. L., aged forty-nine, referred to me by Dr. Starr, of Rochester. Had two children and six miscarriages; last pregnancy nine years ago; baby full term; no history of syphilis; large intra-mural fibroid filling up pelvis, immovable, with a smaller nodule posteriorly and inferiorly obliterating the lumen of the rectum, and pushing the vaginal wall downward and forward. Outlines of mass were easily demonstrated by palpation, as the abdominal walls were thin and movable. Swelling extends three and one-half inches above the pubes. Pain and tenderness in iliac regions and over pubes upon pressure. Sound entered four and a half inches, curve posteriorly. Tissues firm, and resisting to deep pressure upon digital examination, with fullness and swelling in both broad ligaments.

History.—For several years menstrual periods have increased in amount, but for the past two years, and particularly for the last nine months, the flow has been excessive. Attacks of hemorrhages—continuous, lasting for days and even weeks—have occurred from

time to time, and, on one occasion, the patient remained in bed for two months. She used various medicines and had numerous local applications by her physicians; applied ice in the vagina and over the lower abdominal regions. Bowels of late very constipated; in fact, a natural movement has been impossible for months, and even an enema brings little or no return. Locomotion much impeded on account of the resulting pains in the left hip and side, and extending into the back. Bladder symptoms very annoying and often of distressing urgency. I was called to see the patient in January, 1891, and found her in bed, where she had been for eighteen days, flowing considerably, with all the symptoms of anemia well marked, and the physical prostration very great. Upon examination a large mass was felt filling up the pelvis. It was fixed, and the vaginal canal was much shortened and pushed forward by a second and more dependent nodule. A rectal examination was made, and with difficulty the finger was pushed above the obstruction, when the bowel was found to be very much dilated and distended with hardened feces. An injection of sweet oil and glycerine was given, and subsequently soap and water, and with the aid of the finger, and with much effort and pain on the part of the patient, a most prodigious evacuation resulted. A vaginal injection, corrosive sublimate 1-3,000 was given, after which positive intra uterine galvanism administered, 60 m. a. for seven minutes. The hemorrhage, which was considerable before the treatment, was at once controlled. The galvanic application was again made in three days, when it was found that the hemorrhage had practically ceased. The patient was very sensitive to electricity, and complained a good deal with each treatment, yet not sufficient to make me anticipate any possible complication. These treatments were continued every third day for a month, when the patient was enabled to come to my office. After three months' treatment a very appreciable diminution in the size of the tumor had taken place, especially in the smaller mass, which had practically disappeared; at all events it offered no obstruction to the rectum. The bowels were moving naturally; there was no bladder precipitancy; the pains on locomotion had passed away, and the general physical condition excellent, with a gain of twenty-seven pounds (95-124 pounds avoirdupois.) A large accumulation of fat had taken place, especially where the pad had been placed. The menses appeared with regularity, and after the first period, which was excessive as well as painful, the loss was normal in amount. After four months' regular bi-weekly treatments, and once a week for another month, averaging from 60 to 75 m. a. for seven to ten minutes, it was thought that the treatments might be discontinued, but the patient was to return occasionally for observation. To my surprise she returned at once, complaining of a little hemorrhage after the last treatment, and slight pain. Upon examination no tenderness was evident, and no reason could be given for this untoward and unexpected complication. Another positive intra-uterine application was given with great care, and the patient invited to return in three days. Hemorrhage, but increased in amount, was again complained of. The patient was directed to go home, get to her bed, and then I should try another treatment. But to my surprise the hemorrhage was again aggravated, and continued quite copiously for three days. What was to be done, and what was responsible for this condition, were two questions which were seriously presented to my mind. Was

¹ Read before the American Electro-Therapeutic Society, at Philadelphia.

the endometrium, even after such a long course of treatment, at fault by reason of excessive granulation? If so, the os was to be dilated at once and the uterus thoroughly curetted. Or did the uterus and ovaries rebel against the irritative influence of the long-continued galvanic current, and thus keep up the flow? I thought this a possible explanation, and forthwith swabbed the womb with liq. ferri perchlor., and administered pot. brom., grs. xxx every fourth hour, with the happy effect of completely arresting all hemorrhage after a few applications, which satisfactory condition has continued for three months; and in the meantime the periods have come with regularity and have caused no trouble.

Bridget M., aged forty-eight; single; seamstress; referred to me by Dr. Mackey, of Buffalo. Intra-mural fibroid size of orange; womb movable, but restricted by slight adhesions on right side and posteriorly; tissues soft and relaxed; sound entered four inches. Patient had been flowing for five weeks, and for the last ten days was compelled to take to her bed, and using, while in the recumbent position, eight to ten napkins a day. General condition that of extreme weakness with dizziness, headache, palpitation, etc. A sublimate injection was given, and then positive intra-uterine galvanism, 75 m. a., for seven minutes. The hemorrhage had practically ceased at my next visit, on the following day. On the third day another application was made, and so on bi-weekly, with the most satisfactory expectations. Patient at once increased in flesh and strength, and in the course of a few weeks came to my office for treatment. The next period came in five weeks, and lasted for two days. No other menstrual period came for three months, making me anticipate an artificial menopause. The patient showed great tolerance for the electrical current, and complained but very little, even with 125 m. a.; consequently from 100 to 125 m. a. were invariably given. All went well and treatments were discontinued; after the fourth month the womb had reduced one-third in size and all evidences of trouble were at rest. One day, while lifting a heavy carpet, the patient felt something give way, and soon noticed a little blood, and presented herself at once for treatment. Positive galvanism 75 m. a., with great care, was given, and, like in the previous case, it provoked the bleeding. On the third day the patient returned and another treatment was given, and the vagina was thoroughly tamponed with cotton sprinkled with iodoform. The hemorrhage was aggravated, and continued to be provoked after each treatment, until finally the electricity was abandoned, and the womb was thoroughly swabbed with tinct. iodine (Churchill), and immediately the hemorrhage stopped, and it has ceased to be a feature in the case for the past four months. The condition of the patient is excellent.

These two cases are interesting in that they show how quickly dangerous, and perhaps fatal, hemorrhages were controlled by positive galvanism after many other forms of treatment had been conscientiously tried. Moreover, they suggest to our minds the possibility of electrical satiety, in which a condition is brought about where, after long and continuous electrical applications, symptoms at first relieved were provoked and aggravated by its subsequent employment. Whether this is done by tiring out reflex muscular contractile powers, or by ceasing to provoke a permanent eschar on account of certain degenerative changes in the tissues previously influenced by this agent, or by irritating the ovaries, or even by pre-existing adhesions, as suggested by Coe,

as perhaps a cause of obscure hemorrhage, is difficult to answer. They are also interesting in that they present a certain condition of tissues, perhaps brought about by electrical stimulation and decomposition, which enable simple measures to act favorably, when previously they had no salutary influence. Moreover, they impress upon the surgeon's mind the necessity of an expectant treatment in women at this menopause in life, and a frequent recourse to various remedies, which may at one time fail, but after a certain period and after the influence of other treatments, be of signal service.

Let me conclude by saying that these two cases are two out of a series of eleven cases of fibroid tumor in which the others were satisfactorily treated by the Apostoli method.

78 NIAGARA STREET.

THE USE OF THE GASTRIC ELECTRODE IN DIMINISHED PERISTALSIS.¹

BY CHAS. G. STOCKTON, M.D.,
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MY thanks are due your President for the opportunity of presenting before the American Electro-Therapeutic Association this brief paper on The Use of the Gastric Electrode in Diminishing Peristalsis, a subject which has interested me deeply for several years.

The attempt will not be made to point out the various fields of usefulness for the electrodes in gastric diseases. This has come to be too long a story, and although, as might be expected, experience has, to some extent, modified my views, there can be no doubt that in the majority of cases of indigestion, attended with weakened motility of the stomach, the direct electrical current is of decided benefit.

In the fall of 1887 I began the practice of this method of treatment; and, in order to escape the disturbance created by the direct application of the metal electrode to the gastric mucous membrane, I endeavored to protect the stomach by conveying the current through the ordinary stomach tube.

At first an alkaline solution was used in the tube, and by this the column of fluid was made the conducting medium. A weak current was, in this way, transmitted; but the experience proved unsatisfactory.

A tube was next prepared by running through its entire length a copper wire, which conveyed the current to the stomach, which organ was partially filled with an alkaline solution. In this way I was able to carry a current of sufficient strength for any purpose; but the tube, encumbered by the wire, was not easy of introduction, and necessitated too many introductions at one sitting; for the reasons, that I found it necessary to begin and end with an empty stomach, which, in practice, meant the use of the simple tube for lavage, the electrode tube for the current, and again the simple tube for the final emptying of the stomach. This frequent introduction of the tubes at one sitting led to the creation of the contrivance which I have employed ever since, and which, to my mind, better answers the purposes than any instrument within my acquaintance.

It consists of an ordinary stomach tube, twenty-eight inches long, with two openings made near the distal extremity. At the proximal extremity it is fitted with a hollow steel coupling, which, attached to three feet of rubber tubing, makes a continuous

¹ Read before the American Electro-Therapeutic Society, at Philadelphia.

syphon about five feet in length. With this the stomach is emptied, and without removing the instrument from the stomach; the tube is disconnected at the coupling, and a spiral wire, also twenty-eight inches long, is introduced into the tube, and the coupling closed by a polished steel plug at the proximal extremity. In this way the current is conveyed to the stomach admirably, and the gastric mucous membrane is unable to touch the electrode, owing to the rubber covering, save at the fenestræ on either side.

After the application of the current, the electrode is removed, the rubber tubing again coupled on, and the contents withdrawn for study, with but a single introduction and removal of the tube, which resulted, not only in the economy of time to the operator, but also in the saving of no little discomfort to the subject.

Having shown that direct gastric electrization is easily accomplished, the usefulness of the method now remains to be discussed.

For the purposes of study, my institution cases, owing to various interruptions in the treatment, are unsatisfactory. I have, however, the complete records of a series of forty cases, treated in my office during 1891, which show better results and more positive conclusions than do the records of former years.

This includes cases:

1. Where the motility of the stomach has been simply weakened, as well as those in which it is apparently absent.

2. Those attended with dilatation.

3. Those accompanied with gastric catarrh, atrophy of the gastric mucous membrane, and some in which the hydrochloric acid existed in excess.

We are only now coming to appreciate the importance of weakened motility of the stomach walls as a disturbing factor in the processes of digestion. True, we have occasionally to deal with cases in which there is too great motor activity, and others in which the movement is irregular, either as to manner or time; but these are less troublesome, if not less frequent, than the condition of weakened motility. With weak and slow movements there is delayed absorption; fermentation is induced; the chemistry of the stomach disturbed, and toxæmia of gastric origin, giving rise to many of the symptoms which we have been in the habit of calling lithæmic, is the natural result.

In the treatment of these cases, it is best to restrict the diet to those substances which, upon examining the stomach contents, are found most readily digested. The current should be applied after lavage, and the faradic current is that which is usually more satisfactory, and which must be applied in sufficient strength to produce, not merely the contraction of the abdominal muscles, but sufficient to induce movements of the stomach itself; which can be determined by palpation over the epigastrium, and sometimes by the forcible expulsion of fluid from the unclosed tube. A current of this strength is easily borne by the patient; provided a large sponge electrode be applied over the back or over the abdomen. It is, however, strong enough to give pain to the patient if made to pass, by accident, through the hand or face.

The sittings should continue from five to fifteen minutes, usually beginning with five minute séances, and increasing the duration until the limit of endurance is reached, as shown by an excessive secretion of mucus, a disturbance of digestion, or a feeling of lassitude or pain on the part of the patient.

Having reached this, the proper dosage can readily be estimated. The treatment must be continued, in some instances for a prolonged time, in other cases relief follows a few applications.

I can well understand how disappointment to physician and patient would ensue after the persistent use of this method for several weeks without marked benefit, but in a few cases, after months of patient effort, success has at length come, and I have now no hesitation in applying electricity at intervals, for six months, if necessary, to establish a satisfactory peristalsis, without which some patients can not be well.

In the case numbered "4" in this series, the patient was a neurotic woman whose digestion seemed perfect, with the exception of delayed emptying of the stomach.

Under a prolonged treatment by diet and electricity she was better and worse from time to time for three months before a decided improvement occurred. At length the stomach showed the ability to empty itself at the proper time, and absorption from the stomach also became more active. From this time onward there was slow and steady improvement. It was nearly eight months before the patient was discharged well, a result which, I think, was mostly owing to electricity, for when this treatment was discontinued, and lavage, diet and medication alone employed, she steadily lost ground which was regained upon the re-establishment of faradization.

Not so discouragingly long is the case No. 23, that of a young woman, twenty-eight years old, who had for several years suffered from intense headaches; her blood was 20 per cent. deficient in hæmoglobin; her complexion muddy; her tongue coated, bowels constipated; her sleep was disturbed, and she was intensely nervous, with complete loss of appetite; indeed, she said she had not been hungry more than once or twice during the past several months. She made no complaint about her stomach, except that occasionally she would have a headache more intense than others, at which time she would vomit, and after which attacks she felt relieved of her symptoms.

After subjecting her to various forms of treatment, I turned the case over to my associate, Dr. Allen Jones, for further study. The doctor at once turned his attention to the stomach, and discovered that there was almost complete loss of peristalsis, the food remaining indefinitely, and undergoing fermentations which, doubtless, gave rise to the toxæmia and the other symptoms. After lavage she felt relief for a few hours, but her symptoms very soon returned and no positive improvement occurred until the use of the direct electrical current, after which she made rapid progress, considering the long duration of her illness.

The patient recognized the importance of the treatment, and asked for its renewal when it was temporarily discontinued. After two months the case was discharged well, and yet this young lady had been dosed with iron and various other reconstructives for years without the slightest benefit.

As soon as her stomach regained its motility the evidences of toxæmia disappeared, that is to say, she had a good complexion with clear skin, and was without headache, nervousness and sleeplessness; her bowels became regular and she regained her strength. From day to day it was observed that less food was present, less fermentation, the absorption improving as there was evidence of increased motility.

In some cases the greatest benefit appeared to follow after half a dozen sittings.

In No. 20 we have a case in which the treatment had to be discontinued because of the debility which appeared to follow the use of even a moderate current.

The patient was a neurasthenic, single woman, forty years old, who had suffered for years from mental pain and neuralgia, weak heart, disturbed sleep, and the usual symptoms belonging to her class. Her digestion was in every way atrocious, and remained rebellious to every form of treatment which I applied. Perhaps nothing which I did seemed to disturb her more than electricity.

I must not spend too much time on this part of my subject, but before leaving it let me say that in a few instances I have found greater benefit from the application of the continuous current, with occasional interruptions, than by the faradic current which one would naturally apply.

Let us pass on to the discussion of electricity in the treatment of poor motility associated with dilatation of the stomach. There is no question about the importance of the measure here. In fact, I can conceive of no way of relief to the sufferers from gastro-ecasia save by electricity and massage. The faradic current is usually the more satisfactory, and under it there will be found moderate improvement appearing after a comparatively short time; but a great improvement is not usually obtained until months of almost daily stimulation to the gastric musculature enables the stomach to maintain its position, keep to its normal size and empty itself properly.

Twenty-one in this series of forty cases showed greater or less dilatation, as demonstrated by accurate measure. Of this number, twelve showed dilatation of an extreme degree. Some are still under treatment, but five are discharged as cured; all have been greatly benefited, and a number have regained to such an extent that absorption takes place properly, and the stomach is emptied quite uniformly five or six hours after an ordinary meal. This may not impress you as being a remarkable record, but when you consider that the twelve cases were all severe ones; that they have all been benefited; that some have been cured; that others of them are nearly well, I think it will be considered a triumph as compared with any other course of treatment hitherto suggested for the relief of this persistent and very serious condition.

I can only allude to that class of cases in which the stomach movements are diminished, and which cases are associated with gastric catarrh, gastric atrophy or excessive secretion of hydrochloric acid. These complications (if they may be so called), often interfere with the regular course of electrical treatment, and each case must be studied by itself.

The cases in which there is marked gastric catarrh do best under the continuous current. The anode is applied within, the cathode, with a large sponge electrode, applied over the back, and a dosage, ranging from eight to fifteen milliamperes, generally employed.

With the current occasionally interrupted as before described, the dilatation may be relieved, and, not infrequently, the catarrh also improved. In instances of atrophy of the mucous membrane either current may be employed. The continuous current is useful here because it is more potent in stimulating the secretion of hydrochloric acid than the faradic.

Occasionally an excess of hydrochloric acid interferes with the electrical treatment. This, however, is very unusual, and generally then but temporary.

It, in my opinion, should be a rule that the treatment in ordinary instances should be applied at bedtime, and the stomach left empty and at rest during the night. This plan, however, will prove impracticable when there is great excess of hydrochloric acid, for this so disturbs the empty stomach during the long hours of the night that the patient not infre-

quently loses sleep, or wakens in the morning feeling miserably.

These are among the most important points as regards exceptional cases.

These remarks may suffice to give a general idea of this method of treatment, and although I feel tempted to speak with greater particularity, such a course might prove tedious to the hearers.

In closing, it may be well to affirm that in nearly every case of weakened gastric motility, electricity by direct application is of the utmost importance.

The exceptional cases are those which are associated with malignant disease, a few rare cases accompanied by gastric ulcer and weakened motility occurring in some instances of general neurasthenia, in which electricity, no matter how or where applied, is resented by the patient.

It is necessary, in order to obtain success, for one to study carefully his cases as regards diet and avoid over-taxing the digestive strength of the individual. Over-feeding, under-feeding, or the taking of improperly prepared foods, are not infrequently as powerful obstacles to success as the taking of foods unfitted to the given case.

436 FRANKLIN STREET.

THE ACTION AND APPLICATION OF THE FARADIC CURRENT IN GYNECOLOGY.¹

By AUGUSTIN H. GOELET, M.D.,
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THIS paper is presented with the desire that a scientific discussion will be indulged in, and more light will be thrown upon a subject heretofore clouded in much uncertainty and obscurity, to the ultimate benefit of all of us who are interested in the therapeutic uses of electricity. The therapeutic action of the faradic current and its application in gynecology is, to my mind, one of the greatest problems of to-day in medicine. The galvanic current and its capabilities are fairly well understood by those who have taken the trouble to study the subject. But with the other, unfortunately, medical literature is in such a chaotic state in regard to it, that a study of the subject is more apt to bring confusion than enlightenment. One author will declare that it has no action, and that any apparent effect must be purely psychical; while another will exalt its efficiency in the highest terms; one will declare that there is a marked difference between the action of the primary and secondary currents, and even in the current from a different arrangement of secondary coils; while another will deny this distinction, and declare in favor of one secondary coil for all purposes. To one who has had practical clinical experiences with properly constructed apparatus, this appears unwarranted as well as unfortunate. Unfortunate because the faradic current is a therapeutic agent of too much value to be neglected and discarded; and unwarranted because those who have disputed its action have done so without due regard for the chances of failure and uncertainty afforded by imperfectly constructed apparatus.

This leads us to a consideration of the construction of apparatus. Upon investigation it has been discovered that, heretofore, makers have had no guide or standard for the construction of faradic coils, and the length and the size of the wire forming the secondary coil was more a matter of convenience than regard for any physiological effect of the current to be

¹ Read at the first annual meeting of the American Electro-Therapeutic Association, September 24, 1891.

derived therefrom. In consequence these coils will be found to vary from No. 15 to No. 30 wire, and from 60 feet to 200 yards in length. The lower numbers (coarser wire) will be found more often upon the coils of faradic apparatus, because cheaper and more easily handled with less breakage. It is unusual even to-day to find a secondary coil composed of wire smaller than Nos. 22 or 26, and longer than 100 to 200 yards, and the majority are made of Nos. 18 or 20 wire, about 200 feet long. The Engleman battery, with three different secondary coils arranged after the plan of one described in Watteville's work, made by Gaiffe, of Paris, is a decided advance in this direction, and is the only reliable and satisfactory apparatus suitable for gynecological work manufactured in this country. The coarse wire coil is of No. 16 wire, about 75 yards long; the intermediate is of No. 22 wire, about 225 yards long; and the fine wire coil is of No. 32 wire, about 660 yards long.¹ I am led to make this statement because, through correspondence with the different manufacturers, the construction of their coils has been definitely ascertained, according to their own statement. This information is not, however, to be relied upon as absolutely accurate, since the workmen are allowed much latitude, and will often suit their own convenience, using a finer or coarser wire of almost any length regardless of the effect it may produce. The whole subject has been looked upon as such a matter of indifference by physicians who use the apparatus that this laxity is not surprising. I would advise any one who desires to be accurate to ascertain definitely the size of the wire composing his secondary coil, then measure the resistance and calculate the length for himself. The author has done this in several instances, and found the claim made by the manufacturer to be erroneous. With such variation in the construction of apparatus scattered throughout the country, is it to be wondered that uniformity of action is not obtained by different experimenters of this agent? Experience leads me to make the statement that faradic batteries of ordinary construction are not suitable for gynecological work, and satisfactory results must not be expected from their use.

Another serious fault to be found with the construction of the ordinary faradic battery is in the vibrator, or current breaker. Most makers appear to have in view a desire to secure an easy adjustment, and to have it make as much noise as possible, and if it will produce a harsh, rasping sound, to be heard all over the house, it is perfect in their mind. Nor is this fault confined to cheap batteries. The vibrators of otherwise finely made instruments are often constructed upon this faulty principle. A perfect vibrator is a difficult thing to secure, and requires care and time for its proper adjustment. Every apparatus should either have two, for coarse and fine vibrations or else the device should be capable of furnishing both coarse and fine interruptions. And by fine interruptions is meant that they should reach the maximum of rapidity attainable; not fifty or eighty per second, but one hundred and fifty to two hundred. By coarse vibrations is meant from fifty to one hundred per second, and they are to be distinguished from slow vibrations of one to four per second.

Since the primary current is not used for gynecological work, the construction of the primary coil may be left to the instrument maker, who will use

fairly coarse wire of moderate length to get the most work out of the cell or cells operating the battery, though unquestionably it should be proportioned to the secondary coil to be used with it, and the core should be of liberal size. It is the secondary coil on which we rely for effective work and useful results, and too much depends upon the proper construction of the coil from which it is derived to have it treated as a matter of indifference. I am well aware that the difference of effect of differently constructed coils has been questioned, even denied, by otherwise well posted medical electricians; but I am so well satisfied with the correctness of my previous statements upon this point that I reiterate them positively, believing, that in time, they will be admitted without dispute. Those who have disputed this point have done so without taking into consideration the little resistance encountered in the bipolar method where both terminals are applied to the vagina or within the uterus, by means of bare metallic electrodes separated not more than an inch or two. Lay aside the application of this current to the outside of the body where high resistance is encountered, and consider its application with both poles applied to a mucous surface like the vagina, where the resistance is low, it will not take long to demonstrate satisfactorily that there is a decided difference in the action and effect of the current from the long, fine wire and the short coarse wire secondary coils. The former will not only be bearable but rapidly sedative, and not at all painful; while the later will be painful and unbearable applied in the same manner. Do not stop here, but use first the current from the finest Engleman coil (composed of 32 wire about 660 yards long), then use the current from his intermediate coil (composed of No. 22 wire and only a little over 200 yards long) and note the difference. The former will be nothing while the latter will be irritating and painful. If the intermediate is used first and the other afterward, the action of the fine coil will be scarcely perceptible to the patient. But one need not use the current on a mucous surface in this way to be convinced, though the difference is more noticeable there. Let him grasp the bipolar electrode in the hand, so both metallic surfaces will be included, and try the effect of the current from the Engleman coils. A decided difference can be detected by increasing the current from each coil to the point of greatest tolerance. Not only will a difference in the character be perceived, but the current from the finest coil can be endured for a longer time than that from the intermediate, and at the end of a given time its action will be less perceptible, showing the sedative character of the current. The current from the coarse wire will be painful and quite unbearable, even for a moment. It will be admitted that the current from a coil composed of fine wire of great length, has an increased electro-motive force, though its volume is cut down by the resistance in the coil, and it is, therefore, more capable of overcoming external resistances. This is demonstrated by the fact that this current can be made to produce a spark that will jump through several inches of space. It is done by using a coil of fine wire of great length. No such phenomenon will be observed when the coil is composed of coarse wire of moderate length. This shows that the current from the two coils are possessed of different physical qualities, and it is but natural to believe them capable of producing different physiological effects. That, under adverse circumstances, the dissimilarity of effect is not so pronounced, will be admitted, but the fact remains unaltered and beyond dispute. The current from the

¹The numbers used refer to the Brown & Sharpe's American gauge.

long fine wire is one of intensity, that from the short coarse wire is a current of volume; and it is this difference of quality which allows the manifest difference in their physiological effect.

Not only is there a difference in this current, as derived from a long fine wire and a short coarse wire, but there is a notable difference in the current from different lengths of the same size wire, and for the same reason. In the current from a long fine wire you have an increased voltage with less amperage, while in the current from the coarse wire you have more amperage and less voltage. In other words, the former is a current of greater electro-motive force, and the latter one of greater current strength with little electro-motive power. The difference is, therefore, purely one of electro-motive force and volume. That with greater electro-motive force is a current more capable of overcoming resistance, while the other, though possessed of more volume, has less power to overcome resistance, because endowed with less electro-motive force.

The current from the fine wire secondary coil has its electro-motive force increased because of the increased length of the wire, allowing more convolution to be exposed to the inductive influence of the primary, and it stands to reason that the electro-motive force is diminished if the length of the wire is lessened, since the inductive influence is decreased. The result is not the same if the current is transmitted through the whole length of the fine wire, and only half of it is exposed to the inductive influence of the primary, for it still has the great length of the fine wire to traverse with its resistance interposed, which it would not have in the shorter length of wire, and it has but half the inductive influence of the primary. Take for example a coil of fine wire of 1,000 yards, and one of 500 yards. No one will deny the fact that the former will give more resistance than the latter. With the former exposed for half the length to the influence of the primary, half of this influence is lost, and with it half of the power exerted by the generating cell, and the current has to encounter the resistance in the whole length of the 1,000 yards of wire. With the 500 yards coil exposed to the full influence of the primary, the full inductive influence is secured and none of the battery power is lost, while the current has less resistance to encounter in traversing only 500 yards of wire, than if it was compelled to traverse the whole distance of 1,000 yards. This ought to be clear to any one, and, if so, the difference of result must be appreciated and admitted.

If any one doubts the fact that these currents, from different size and length of wire, have different volume under the same condition of external resistance, let him try the experiment of placing a milliamperemeter in the circuit of each one separately, and make and break the current slowly by moving the vibrator with the finger, or by means of the single contact key. The deflection of the needle produced by the coarse wire coil will be very noticeable, while with the fine wire coil it will be so slight as to be scarcely recognized.

It is not intended to convey the impression that these currents from the different coils are to be used in the same manner and with the same rapidity of interruptions; for the action of the current depends much upon the interruptions being proportioned to the coil and the effect intended.

I am satisfied that a faradic battery, to meet all requirements, should have not two but four or five secondary coils to secure the variation of effect of which this current is capable. With this view in mind I

have had five coils made for my cabinet battery. Besides the Engleman coils, one is of No. 36 wire 1,000 yards long, and another of the same wire 500 yards in length. By this means we will be able to treat very sensitive conditions of the pelvic organs, which could not be approached with the usual coils. The longest coil of finest wire is used first, and when that has sufficiently anaesthetized the parts the next is employed. Sometimes this may be done at one sitting, and two coils used successively; in other cases it will take several sittings to overcome the sensitiveness sufficiently to allow the current from a shorter wire to be employed. My experience leads me to conclude that the Engleman coils, though a great improvement upon the others, do not wholly meet the requirements of gynecological work, and I would suggest for the finest coil a No. 36 wire 1,500 yards in length. This tapped at 1,000 yards gives in addition two other coils, one of 1,000 and one of 500 yards in length. Then another coil of No. 32 wire 800 yards long, tapped at 500 yards, would give a coil of that length, and also one of 300 yards, giving in this coil three different lengths; another of No. 22 wire 250 yards long, to correspond with Engleman's intermediate. Then a coarse wire coil of No. 16 wire 100 yards long. By this arrangement with four spools we get practically eight different coils, and a corresponding variation in the current with the addition to the apparatus of but one spool.

There are several points of importance in connection with the use of the faradic current which have not been sufficiently emphasized, and are, therefore, not appreciated. One is, that in using the secondary coil of fine wire for its sedative effect, the interruption should reach the maximum of rapidity, and that they should be perfectly smooth and even without jerk or shock. It must, also, be borne in mind that the intensity of the current must be increased very gradually, so gradually in some conditions as to be scarcely perceptible to the patient, and the decrease must be in the same manner. The current should never be turned on or off suddenly. Besides the irritant effect upon the diseased structures under consideration, it is decidedly unpleasant to the patient.

Another point often overlooked in using the current from the short, coarse wire coil for stimulation of the muscles is, that the interruptions should be slow, and in marked contrast with the fine interruptions to be used with the current from the fine wire coil for sedation.

There is a reason for this. In effecting sedation it is desired to paralyze the sensory nerves and to relax and wear out the muscles, thus relieving the painful contractions. When the interruptions are rapid, and the muscles are unable to respond to every vibration, and a constant contraction or a tetanoid condition is produced, which eventually wears out their contractile power, and there is consequently a condition of relaxation brought about if the application is continued long enough. The same constant and intense stimulation of the sensory nerves results in a temporary loss of their power to respond, and, in consequence, a condition of anaesthesia is produced more or less prolonged, depending upon the duration and frequency of the application. With the current from the short, coarse wire, we desire to produce a stimulation of the muscles, and alternate contraction and relaxation, which will resemble the normal physiological action, and the interruptions must be slow, so as to allow the muscles time to recover and again respond in a normal manner. In other words a sufficient time must be allowed between the interruptions

to permit the molecular changes to take place. If the excitation of the motor nerve is rapid, a tetanic contraction of the muscles is produced, during which relaxation does not occur. Slow interruptions permit distinct contraction and relaxation to take place, and the normal physiological action is closely imitated.

We get another effect of great value from the stimulation of current from the long fine wire coil. I refer to its effect upon the vaso motor nerves and the capillary circulation. The stimulus exerted by the current produces contraction of the vessels and an increase of the vermicular movement, which quickens the circulation. This hastens the absorptions of effete products, and combats blood stasis, thereby relieving congestion. To comprehend this, the difference in the action of the current upon the voluntary and involuntary muscles must be understood. In the voluntary muscles the contraction takes place as a whole, and by one effort; in the involuntary muscles the contraction is composed of two acts—a distinct contraction and a vermicular motion. The action is not spasmodic in the whole muscle at once, but in each fiber in turn, or in succession, producing the vermicular movement. The spasmodic contraction in the blood-vessels cuts off the blood supply, and the vermicular contractions produce the normal movement of the vessel walls, increasing the amount of blood passing in a given time; or, in other words, hastens the circulation, and produces rapid emptying of the vessels. We can make use of this action of the current in lessening capillary congestion.

It is the general opinion that there is no direction to the flow of the faradic current, and it is not endowed with polarity, being a to-and-fro current; consequently, there is no choice in the location of the electrodes, but experiments rather go to show that there is a direction to the current flow in that the descending current increases the vermicular movement of the blood-vessels, and augments the blood supply to a part, and that the ascending current lessens the flow by diminishing the vermicular movements. Bearing this in mind, then, we can apply it to increase or lessen the blood supply to different parts of the body. While there is apparently no difference in the poles of the faradic current, as shown by the galvanometer alone in the circuit, since with each make and break of the current the needle will oscillate in opposite directions; there is, nevertheless, a great difference physiologically, the negative pole being markedly stimulating and irritating in its effect, and the positive soothing. The reason for this is, that through the low resistance of the galvanometer coil, both make and break currents have a perceptible action, but through the high resistance of the human body, only the break current has sufficient electro-motive force to produce muscular contraction, or sensory impression, the other (the make current) producing no action. Hence, as applied to human tissues, the faradic current may be said to flow in one direction; and there is a difference in the pathological effect of the two poles.

Another point worthy of special consideration is the fact that the best effect of the secondary current is to be obtained only when the secondary coil covers the primary completely. In using the current from the long fine wire coil for its sedative effect, I observed that there was one relative position of the two coils where the current was least bearable; in fact, in some cases it could not be endured. This position was with the secondary coil standing from two-thirds to three-fourths covering the primary. In this position

it is even more painful, or rather perceptible, than when completely covering the primary. In consequence of this noticeable difference, I for sometime worked by advancing the secondary coil rapidly when this point was reached until it completely covered the primary. It finally occurred to me that this could be overcome, and the best effect secured from the beginning of the application by placing a rheostat or controller in the battery circuit to regulate the current circulating in the primary coil, and tempering it at the start, so as to allow the secondary coil to be submitted to the full influence of the primary; then increasing the current by lessening the resistance of the rheostat or introducing more battery power. After trying several forms of rheostat for this purpose I had one constructed of German silver wire, which answers the purpose admirably and takes up very little space. By employing a rheostat of this kind two, three, four or six cells may be used, and the current may be graduated to meet the requirements of any case. The vibrator should be started with the least possible current that will run it smoothly, and the secondary coil is removed from the primary. Then placing the electrodes in position, the secondary coil is advanced slowly over the primary until it is completely covered. As the current becomes imperceptible to the patient a little more battery current is let in through the rheostat, and the increase is continued in this way until the desired strength is reached, all the while the secondary coil is receiving the full induction of the primary. In other words, the whole length of the secondary coil is employed during the whole of the application instead of a portion of it. This is important, for not until the secondary coil completely covers the primary does the whole coil receive the full induction. Hence it is necessary to proportion the current of the primary coil or battery circuit (the inducing current), so that the application may be made from the start with the secondary coil exposed to the full influence of the primary. By means of the rheostat introduced into the battery circuit the current can be regulated to a nicety, and by starting the vibrator with the least possible current at first, the secondary coil being removed from the primary, then moving it completely up and increasing the strength of the current in the primary coil by increasing that in the battery circuit, the current of the secondary can be so tempered and held under control that the most sensitive conditions may be brought under its influence; such conditions in which it would not be possible to apply the current in the ordinary manner with the best effect.

The clinical capabilities of the faradic current as derived from properly constructed apparatus, and the therapeutic indication, can be readily inferred from what has been said in the preceding pages. It will be unnecessary for me to attempt to tell you when sedation is required or when muscle stimulation is desirable. The different physiological effects of the induced current, as derived from differently constructed coils being recognized, the ground is comparatively clear. It may be well, however, to state that acute inflammatory process is amenable to treatment by this current under suitable conditions of high tension, as when it is derived from a coil of very fine wire of great length, if a maximum rapidity of interruptions with perfect smoothness is secured; the effect being obtained by restoring the equilibrium of the circulation.

The points in the paper upon which discussion is particularly invited are:

1. The construction of the secondary coil.

2. The different effect of coils of different sizes and length of wire.
3. The polar action of the current.
4. The regulation of the current by the rheostat in the battery circuit.

In closing I would make a plea for more attention being given to this valuable therapeutic agent, and for better teaching on the subject in medical colleges, and particularly in post-graduate schools. It is an agent of so much value that it will be found to be indispensable when properly understood. If the teaching is done and done properly, we will hear of fewer failures; because, when selected to be used it will be employed with more accuracy in appropriate conditions.

351 WEST FIFTY-SEVENTH STREET.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

WEAKE collyria, frequently applied, are more efficient than strong collyria applied at longer intervals.—*Keyser*.

In strabismus convergens in children, the defect of refraction mostly found is a high grade of hypermetropia, often combined with astigmatism. When the hypermetropia is of a very high degree, there seems to be a certain power of suppressing the image, or use of one eye, without inducing the contraction of the internal rectus muscle—an apparent amblyopia without deviation of the ball.—*Keyser*.

When an incomplete operation for malignant disease is performed, the operation seems to act as a whip, causing the growth to return with renewed vigor. Therefore, do not operate at all, unless you remove the growth completely.—*Laplace*.

In all abrasions of the cornea, place a firm compress bandage over the eye. The object of this is to keep the ball still, as every movement of the eye causes the cornea to rub against the upper lid, producing severe pains. If the bandage is not firmly applied, the ball will follow the movements of the other eye, therefore some pressure must be brought to bear to prevent this. The epithelium of the cornea reforms in from twenty-four to forty-eight hours, and the bandage may then be removed.—*Keyser*.

Sometimes, even though you check a conjunctivitis neonatorum, if there has been an ulceration of the cornea, a staphyloma may extend from the scar. As long as this condition does not prevent closure of the lids, no operation is needed; but when such occurs, abscision, evisceration or enucleation must be resorted to.—*Keyser*.

COOPER HOSPITAL (N. J.) NOTES.

THE TREATMENT OF VAGINITIS.

IN vaginitis, the combination of the moist and dry methods of treatment will proved the most serviceable. The moist method, or the employment of the hot, medicated douche, is not alone sufficient for a speedy cure. The hot douche, medicated with bi-chloride of mercury (1 to 3,000), or with permanganate of potassium of sufficient strength to sharply discolor the water, or with borax, a drachm or two to the quart of water, is required for cleansing and antiseptic purposes.

This, however, will not be thoroughly accomplished unless given while the subject lies in the recumbent posture. After the vagina has been antiseptically cleansed, the inflammation may be materially reduced by the insertion of a tampon of antiseptic cotton (preferably the bi-chlorinated) into the vagina for the purpose of separating and keeping apart the vaginal walls. This constitutes the dry method of treatment. The virtues of the cotton may be increased by dusting upon it bismuth, aristol, boracic acid or iodoform. A tampon should be inserted daily after the thorough use of the hot, medicated douche. If a vaginal inflammation is disposed to linger after these methods of treatment have been employed, applications of nitrate of silver are then required.—*Godfrey*.

THE TREATMENT OF PUERPERAL ECLAMPSIA.—In conclusion let me summarize as follows:

1. The exclusive use of the term puerperal eclampsia, to mean convulsions during pregnancy, and due to uræmic poisoning, is not warranted.

2. Puerperal eclampsia is generally due to uræmic poisoning, but it may be due to irritants in the alimentary canal; it may be hysterical or epileptic.

3. The intelligent management of this disease implies a recognition of these causes.

4. When due to uræmia, the result of acute parenchymatous nephritis, there are two great indications for treatment, combat the eclampsia and hasten elimination.

5. To control the convulsions in plethoric subjects, phlebotomy should be practiced, but not in other types of cases. The hypodermic injections of morphine in $\frac{1}{3}$ or $\frac{1}{2}$ grain doses is decidedly proper. Chloral hydrate per orem, or per rectum, is commendable in the early stages. Chloroform is of doubtful utility.

6. To hasten elimination, diaphoresis should be maintained until the coma yields or death claims the case. This can best be accomplished by the hypodermic use of pilocarpine and moist heat.

7. To secure the vicarious action of the alimentary canal, elaterium, croton oil, or calomel, should be given early and repeated if necessary. The agents may be passed into the stomach through a stomach tube.

8. A poultice of Squibb's powdered digitalis applied to the region of the kidneys is worth trying as a diuretic. In cases that can swallow, infusion of juniper berries and digitalis should be given per orem.

9. Evidence, both clinical and autopsic, has now accumulated until we are forced to acknowledge the gravid uterus holds a causative relation to acute parenchymatous nephritis, and is therefore a potential factor in the production of the cyclonic disease called puerperal eclampsia.

10. No attempt should be made to deliver the fœtus during a paroxysm.

11. As soon as the os is dilated or is easily dilatable, the efforts of nature to expel the contents of the uterus should be aided, and that, too, in all cases, not excepting those in which the convulsions have ceased.

12. Premature labor takes place or is produced in all cases that recover.

13. Efforts at elimination should be made paramount to everything else in the treatment of this disease.

—Wright, *Pacific Med. Jour.*

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THE NEW JERSEY MEDICAL EXAMINERS.

In the First Annual Report of the New Jersey State Board of Medical Examiners, we note the following results of the examination of candidates presenting diplomas from the Philadelphia colleges:

University of Pennsylvania, 14 passed, 3 rejected.

Jefferson, 8 passed, 5 rejected.

Woman's College, 2 passed, 2 rejected.

Medico-Chirurgical, 1 passed, none rejected.

Average grades attained:

University.....	81.7 $\frac{4}{7}$
Jefferson	74.6 $\frac{11}{13}$
Woman's.....	78.0 $\frac{3}{4}$
Medico.....	83.2

Percentage of successful candidates from each:

Medico-Chirurgical.....	100.
University	82.1 $\frac{6}{7}$
Jefferson	61.1 $\frac{7}{13}$
Woman's	50.

Of the unsuccessful candidates, 3 failed in materia medica, 4 in obstetrics, 14 in practice, 9 in surgery, 3 in anatomy, 3 in physiology, 8 in chemistry, 11 in histology, pathology and eye and ear diseases, and 10 in hygiene and medical jurisprudence. It will thus be seen that practice was the chair that presented the greatest difficulty; DaCosta's pupils only making an average grade of 65.6; while Pepper's reached 74.6+, Walker's 72.5, and Waugh's one representative 76.

We looked over the list curiously, to find the reason of H. C. Wood's recent ebullition of wrath against the Board; and we found it. One candidate, who valiantly upheld the combined banners of the University and the Jefferson, seems to have found the weight too heavy; for, after attaining an average of 65.6 in materia medica, he disappears from the field. But as his candidates, collectively, attained the grade of nearly 89, Dr. Wood had no reason to complain of the Board, which gave Bartholow's pupils 83.6+.

The graduates of European schools made the following record:

One from Padua, took the grade of 75.3, failing in surgery; one from Bonn and Würzburg, 79.5, failing in practice and surgery; one from Leipsic, 94.2; one from McGill (Montreal), 90.7; and of two from Zürich, one took 71.5, failing in materia medica, practice, anatomy, histology and hygiene; while the other scraped through with 75.1, failing in obstetrics, anatomy, histology and hygiene.

IMPROVED VAGINAL DOUCHES.

DR. EDWIN PYNCHON describes, in the *American Gynecological Journal*, a device for securing the advantages of a post-partum douche without soiling the bedding. The apparatus consists of a short, hard-rubber speculum, a soft-rubber discharge pipe, and a hard-rubber vaginal tip, passing through a small hole on the upper side of the soft-rubber discharge pipe near its attachment to the speculum, and connected by a suitable hose with a fountain syringe, in which is the irrigating fluid.

The application is obvious. The irrigating fluid passes into the vagina through the small tube and returns through the large one, thus avoiding the soiling or wetting the bed.

Great minds evidently run in the same channels. About six years ago we became possessed with the idea that we had invented something valuable. We whittled out a wooden pad, somewhat like a truss pad, passed a short wooden syringe tube through it, projecting about an inch beyond the surface of the pad, and just below this passed another tube that stopped at the surface. The long tube was connected with the delivery pipe of a fountain syringe, and the short one with a similar tube leading to a receptacle for the out-flow. It was intended for use in cases where it was thought desirable to flush the vagina with water hotter than could well be borne by the skin; as Emmet recommended. But just as the apparatus had assumed definite shape, we received an advertisement from an New England firm, of an instrument that embodied the essential features of our own idea, and was protected by a patent; while at present there is running in this journal the advertisement of a Chicago house that is supplying a very similar instrument.

Nevertheless, our own contrivance was the best; and for these reasons: Being of wood, a non-conductor of heat, much hotter liquids could be used than where a metal tube was employed, as in the Maine apparatus. In the latter, the vagina was occluded by a rubber ball; and this soon collapsed and rendered the apparatus useless.

The semicircular shape, and the size, of our pad allowed it to be used in all cases, as, no matter whether the vaginal opening were large or small, with the ball pressed firmly against it there was no leakage. In Dr. Pynchon's apparatus it is impossible to prevent this, even with three tubes of different sizes.

The shape of our pad also allowed the whole vaginal mucosa to be subjected to the douche, whereas

a speculum that is inserted prevents the contact of the fluid with a great part of the vaginal wall.

The short delivery tube prevents the accident to which a long tube is liable, of being inserted directly into the mouth of the uterus, and unintentionally administering an intra-uterine douche.

A small *pincette* was attached to the outflow tube; and when this was closed, the vagina became thoroughly distended, and the fluid was thus brought in contact with every portion of its surface. These advantages have not been obtained in any other apparatus we have since seen; though the Knap syringe comes nearer to them than any other.

Annotations.

DR. J. L. A. BURRELL, of Williamsport, Pa., died, October 24, of intestinal perforation. He graduated at the University of Pennsylvania in 1877, and had practised in Williamsport for twelve years, winning the highest esteem of the profession and the community at large. He was regarded as one of the best physicians in the interior of the State, and was also a vestryman of Christ Church. He leaves a wife and three young children. His fatal illness dated only from the preceding Wednesday, when he was seized quite suddenly.

IT looks as if the inevitable reaction against the Keeley epidemic had commenced. Evidently, all the newspapers are not in the "combine" to boom Keeley; and in the outsiders, items relative to failures, relapses, and deaths under treatment, are beginning to multiply. We are, frankly, sorry. We hope Keeley, or any other person who can do it, will continue to cure as many inebriates as he can possibly reach; and we don't care how much he makes out of them. And we hope that some attention will thereby be directed to the noble work of Mattison, Crothers, and others in the regular medical profession, who are working out the same problem honestly, and furnishing the materials out of which men of the Keeley stripe are making money. And we further hope that the medical profession generally will rouse itself up, and comprehend that something can really be done for the inebriate, and that it is our duty to do it, and not leave these unfortunates to the tender mercies of money-grubbing quacks.

IN the *Cleveland Medical Gazette*, Baldwin describes a singular case. A lady, aged twenty-two years, had a tumor as large as a cocoanut projecting from her vulva. The protuberance was found to consist of a prolongation of Douglas' cul-de-sac. It was laid open, and the fluid contents drained away. It was then found that on one side was an ovarian cyst, and on the other a cyst of the broad ligament, each the size of an orange. The reporter proceeds with his description in the following words:

"I therefore suggested that we try to secure enough local inflammation to cause obliteration of the sac, as in a case of hydrocele of the tunica vaginalis. I dipped my finger into a 1 to 1,000 solution of bichloride of mercury, and repeatedly applied this to the inside of the sac. The incision was then closed by silk sutures," etc. "Inflammatory reaction came on, but this was limited to the cyst, which was obliterated, and the patient was cured."

It appears, from this account, that the ovarian cysts were not touched, and that the above description refers merely to the protrusion from Douglas' cul-de-sac into the vagina. If this be the case, a cure can hardly be assumed until the cysts are disposed of in some manner.

FETID FEET.

THE cause of this unpleasant ailment is to be found in the unnatural custom of wearing shoes. Nature contemplated a shoeless animal when she made man, and she so arranged the epithelium on the soles of his feet as to provide for a rapid reproduction of the layers worn off in walking. So well suited to man's necessities was this arrangement, that Parkes, after discussing the merits of various foot-gear, concludes that the best shoe for soldiers is no shoe at all. But man had to improve on nature, and the way he has done it is by encasing the foot in an impermeable casing of tanned leather. This prevents the removal of the epithelium from the sole, and also prevents the escape of perspiration, which, keeping the dead epithelium moist, infallibly renders it odorous.

The reason why washing does not relieve this is, that soap and water alone are insufficient to remove the epithelium. No amount of rubbing will do this; and it is doubtful if anything short of a vigorously-wielded scrubbing brush will do so. But the Greeks had something better even than this. Some of our readers will remember the description given by Xenophon of the games instituted by Cyrus, before his march to the field of Cunaxa, and that among the prizes given to the victors were "golden flesh-scrapers." Not even a brush equals in efficiency the scraping with some metallic instrument, like a dull paper-cutter.

We would recommend, therefore, for fetid feet, that the sufferer should soak the feet in hot water, and scrape them well, every night until the nuisance is abated; and to keep this up weekly thereafter, with morning ablutions of cold water with no soap, but followed by vigorous rubbing with a coarse towel. This is better than all the salicylated powders or ointments.

Letters to the Editor.

NOTES ON PHENACETINE-BAYER AND SULFONAL-BAYER.

YOUR readers may be interested to know of some recent uses of these medicaments in general practice. One of my patients was a man, who had undergone the operation of lithotripsy; since which he has passed numerous small pieces of stone, and is obliged to use a catheter to relieve the pain, and possibly to remove a piece of the calculus, which causes intense pain. He had been obliged to take a morphine pill or use opium every night to procure sleep. The first night after I had given him grain x of sulfonal-bayer, in powder, dropped on the tongue (and a drink of water to wash it down), the patient went to sleep in two hours, and remained sleeping two and one-half hours.

On the second night I gave two doses of grain v each, two hours apart. As my patient was suffering considerably I also gave grains v of phenacetine, which relieved the pain and procured, with the sulfonal, five or six hours of good, refreshing sleep.

The patient said he "had not slept so well for months." Since October 5 he has taken but $\frac{1}{8}$ grain dose of morphine, and once only 1 grain of opium.

Under the treatment with sulfonal and phenacetine, at night, in conjunction with fl. ext. of pichi gtt. xx twice daily, and the use of the Buffalo Mineral Water, my patient is much improved.

I have also used both sulfonal and phenacetine with marked success in colitis, in inflammation of the small intestines, intermittent fever, neuralgia, etc.

I consider sulfonal a most potent hypnotic. Phenacetine is, to my mind, one of the best analgesic remedies we possess.

DR. M. F. OSBORNE.

DARIEN, CONN.

TWO CASES OF ABNORMAL MENSTRUATION.

CASE I.—Eva C., aged nine; brunette. An imbecile, who has menstruated regularly from her seventh year. Enjoys perfect health; she is well developed, large limbs, perfect mammas, etc. Weighs one hundred and twenty pounds. In this climate we think this quite an unusually early menstruation.

CASE II.—Mrs. W., aged twenty nine; mother of four children; menstruates regularly during her pregnancies. Flow same as usual in appearance and amount. Has never had any abortions or difficulty in her confinements.

O. A. RHODES, M.D.

WASHINGTONVILLE, OHIO.

Book Notices.

A TEXT-BOOK OF PHYSIOLOGY. By M. FOSTER, M.D., LL.D., F.R.S., Professor of Physiology in the University of Cambridge, England. Fourth American from the fifth English edition, thoroughly revised. Octavo 1,072 pages, 282 engravings. Cloth, \$4.50; leather, \$5.50; Philadelphia: Lea Brothers & Co.

The last English edition of Foster has received in our pages the encomiums it so justly deserves. There remains but little to add concerning the present American edition, except that the work is presented with that beauty of typography for which the Lea Brothers are noted. The American editor has enhanced the value of the work by references to the physiological action of some of the more important drugs, and by multiplying the illustrations.

To the student physiology is usually the most tedious of his tasks; but when he has become a practitioner he finds that that he cannot give too much thought to this study. If we could imagine a practitioner of twenty years' standing, who in that time had devoted himself earnestly to his work, and yet had failed to procure any physiological work later than his college text book, what would be his sensations on opening such a work as the one before us? He would be amazed at the progress made. He would find the book more interesting than any novel; at every turn he would see cause for wonder. His difficulties would vanish and his therapy become comprehensible under the clear light poured upon it from this source. A veritable mine of riches would be opened up to him.

We have taken pains, at all times, to direct our readers' attention to the valuable works on physiology issuing from the press. No other branch of medicine has received so much of the limited space at the disposal of the reviewer in a weekly, as no other works are of such importance to the physician.

ESSENTIALS OF BACTERIOLOGY. Being a Concise and Systematic Introduction to the Study of Micro-organisms, for the use of students and practitioners. By M. V. BALL, M.D. With seventy-seven illustrations, some in colors. Philadelphia: W. B. Saunders. 1891. Cloth; pp. 159; 12mo. Price, \$1.00.

This is one of the very few compends that has any reasonable right to existence. In the present case, the *raison d'être* may be thus expressed: Many men would like to know something of bacteriology; not to master the subject, but enough to be qualified as appreciative readers and listeners; to keep "in touch" with the Kochs and Pasteurs who are revolutionizing things and knocking the old pathology topsy-turvy about our ears. But we think we haven't time for such studies. We are like Martha, engrossed in the routine of living, and we want our pabulum ready cooked, ready masticated, so that we can bolt it as we do our meals. That is just what this Buffalo man has done for us, and his little book is just what vast numbers of "busy practitioners" want. Many will never want anything better; but some will so fully appreciate the work that they will be led into the study of the greater works, such as those of Fränkel, Crookschank, Macé, and Eisenberg, from which Ball has drawn his materials.

ARTIFICIAL ANÆSTHESIA AND ANÆSTHETICS. By DE FOREST WILLARD, R.M., M.D., Ph.D., and LEWIS H. ADLER, JR., M.D. 1891. George S. Davis. Detroit, Michigan: Cloth, 50 cents; paper, 25 cents.

ADDRESSES, PAPERS AND DISCUSSIONS IN THE SECTION OF STATE MEDICINE, at the Forty-second Annual Meeting of the American Medical Association, at Washington, D. C., May 5-8, 1891. Chicago: Printed at the office of the Association. 1891.

LA PRATIQUE JOURNALIÈRE DES HÔPITAUX DE PARIS. Aide-mémoire et formulaire de thérapeutique appliquée, par le professeur PAUL LEFORT, 1 vol. in-18 de 360 pages, cartonné, 3 fr. Ce volume fait partie du "*Manuel du Médecin-praticien*." Librairie J.-B. Baillière et Fils. 19, rue Haute-fenille (près du boulevard Saint-Germain), à Paris.

In this volume is presented an outline of the daily practice of the Paris hospitals. Diseases are taken alphabetically, and the matter is divided uniformly into treatment, local and general, regime, and prophylaxis. One hundred and thirty-five clinicians are quoted, and 518 extracts from their notes are given. New remedies and antiseptics are given special prominence.

Under the head of diphtheria are given the views of Bouchard, Bouchut, H. Huchard, C. Paul, J. Simon, Sevestre, Gaucher, and Hutinel; while for typhoid fever, we find the treatment of Bouchard, Jaccoud, Hayem, Debove, Millard, Hallopeau, Chauffard, Gérin-Roze, Legroux, Huchard, Juhel-Rénoy, Hirtz and Josias. Much importance is given to skin diseases, trichophytosis and impetigo being each allowed more space than tuberculosis. As a picture of Paris hospital practice the book is of considerable interest.

SENILE PRURITUS.—Dr. Besnier, writing in *l'Union Médicale*, recommends the following method for the relief of pruritus in the aged: Every evening the body is sponged with a lotion, warmed to 104° F., to each quart of which is added one ounce of a solution of one part of carbolic acid in fifty parts of aromatic vinegar. After drying, the parts are powdered with one of the following: Salicylate of bismuth, 3v.; powdered starch, 3ij.; or finely pulverized salicylic acid, 3ijss.; powdered starch, 3ij. Bran or starch baths are also recommended.

The Medical Digest.

MENTHOL CAMPHOR.—The important point to be emphasized in the use of this, as well as other potent remedies, is the choice of the proper strength in adapting it to each individual case in order to secure the best results. In chronic hypertrophic rhinitis in a person of dull sensibilities, a 25 per cent. solution may be used with excellent effect; whereas, in the opposite extreme of temperament, in which the Schneiderian membrane is exquisitely hypersensitive, a first inhalation stronger than the 3 or 5 per cent. solution, may appear to act as an irritant.

I have injected a 10 per cent. preparation in lavoline into the Eustachian tube, which was closed so firmly that it was impossible to inflate the middle ear by the Valsalva or Politzer method, with the result of opening the tube so well that on the following day there was no difficulty in injecting remedies through it into the tympanic cavity. This has occurred repeatedly.

No ill results have followed the injection of 5 and 10 per cent. solutions into the middle ear, but in several cases of catarrhal affections of that cavity the hearing was improved, and the head has felt clearer after the injections.

I have applied the full strength camphor-menthol to eczematous eruptions and found that it relieved the pruritus and reduced the swelling and redness. It had a similar effect in herpetic eruptions.

Finally, camphor-menthol contracts the capillary blood-vessels of the mucous membrane, reduces swelling, relieves pain and fullness of the head, or stenosis, arrests sneezing, checks excessive discharges and corrects perverted secretions.

—Bishop, *Jour. Am. Med. Asso.*

SULFONAL POISONING.—Poisoning by large doses of sulfonal have been very rarely noticed. A laborer in Riedel's manufactory wishing to get a satisfactory sleep, took about three tablespoonfuls of sulfonal. Thereupon he slept four days and nights, when he awakened. He slept one and one-half days longer, and afterwards was somewhat dizzy, without experiencing further disagreeable consequences.

The present case is that of a fifteen-year-old, healthy apprentice, in a drug house, who was transferred from the surgical to the medical clinic, with the statement that he had poisoned himself with some unknown substance. He had a temperature of 96° and was profoundly unconscious; respiration easy and quiet; pulse 100, rather small, but regular. The patient's condition was not alarming, and he was treated during the night with warmth and excitants.

On the following morning the patient was quietly sleeping; the countenance slightly reddened; the mouth closed; the respiration quiet (18) and deep; pulse 96 and extremely variable; reflexes uncertain, except that the corneal reflex was always distinct. The pupils, of medium dilatation, reacted variably to light, returning immediately to their former size.

The patient did not react to cries and shaking. Pricking of the face, hands and feet produced no effect, except a distinct widening of the pupil. Now and then languid jactitation occurred.

Salicylic acid and phenacetine were mentioned as possible causes of the condition, but the chloride of iron did not react upon the urine. Finally, we learned that two boxes of 50 grammes each of sulfonal (over three ounces) were missing.

The patient now received, beside excitants and cold douches every two or three hours, rectal injections of 200 to 400 ccm. of lukewarm water (later milk and wine, also), in order to hasten the excretion of the substance by increasing diuresis. We were successful in keeping up a daily passage of about 1,000 ccm. of urine by the patient, who always retained the repeated injections of small amounts of water, although he received nothing by the mouth. There was neither albumen nor sugar in the urine. Professor Jaffe was able to detect sulfonal in it, excreted unchanged.

On the third and fourth days the patient slept soundly. He reacted better to irritants, but without awaking.

The temperature, which at his admission was 96° to 101.3° on the fourth day, fell to normal on the second day; rose to 100.8 two days later, and then fell to normal, where it remained. On the part of the lungs there was nothing pathological. The pulse had now become good and the respiration peaceful. No defecation.

On the fifth day the patient opened his eyes repeatedly, but was completely unconscious. The pupils were wide and reacted sluggishly. After a time languid answers came in response to energetic questioning: "What have you taken?" "Sulfonal." "How much?" "A hundred grammes." His speech was slow and labored. He immediately fell asleep again.

On the sixth day he answered questions slowly but rationally, and took nourishment by the mouth. He imagined he was on a ship (dizziness?). In the course of the day he could see everything. Ocular field normal. He could not stand or walk without assistance.

On the palmar surface of both wrists there was an itching exanthema of numerous small, pale-red papillæ, as large as the head of a pin.

On the seventh day the patient was in full possession of consciousness, yet felt dull and dizzy, and remained in bed.

On the eighth day the exanthema had faded. The patient left the bed and was dismissed on the following day in perfect health.

It was substantiated that the patient had taken the whole contents of two boxes of finely powdered sulfonal, of 50 grammes each, and that he had washed down the largest part with considerable amounts of water. Thereupon he went into the open air and walked about three quarters of an hour. He could give no account of himself after this time. After six hours he was found unconscious and was made to vomit, and was then brought into the clinic.

An extraordinarily large amount of sulfonal was absorbed, for the patient did not vomit until six hours after its ingestion, and after an unconsciousness of five hours. A part had, without doubt, already passed into the intestine. Furthermore, the patient had no movement of the bowels until the fifth day, and unchanged sulfonal was excreted in the urine.

The favorable outcome is to be explained by the slowness of the process of absorption in the alimentary canal, caused by the difficult solubility of the sulfonal (according to Kast, 1-200 in the gastric juice at the body temperature), and its excretion by the urine. Hence, the importance of free diuresis in such cases.

Finally, our case shows that sulfonal does not possess a cumulative action, provided that the secretion of urine continues to be sufficient.

—Ernst Neisser, *Med. Woch.*, May 21, 1891.

GOLD IN PHTHISIS.—Miss S., aged twenty-eight years, medium height, weight eighty-five pounds, fair complexion, dark hair. Four years ago she had a spell of illness, pronounced malarial fever, with cough and pain in chest. Cough continued for a year, more or less severe, with expectoration of white and yellow sputa. Without treatment cough and expectoration gradually lessened, but a dry, hacking cough continued, increased by colds, which also caused a return of the expectoration. About a year ago she had an attack of la grippe which settled on her lungs and throat. She was in bed and very sick for a week, and from this time cough, expectoration and pain in the chest and throat continued, with no improvement, up to the time I was called to see her, in February last. Physical examination revealed dullness over upper portion of the left lung with interrupted inspiration, prolonged expiration and moist râles throughout this region. The throat showed evidences of chronic pharyngitis, the tissues about the glottis were swollen and the voice was husky. Temperature, 100° to 101° F. The face had a hectic flush, and she complained of great debility. I found, on questioning her, that she first menstruated at the age of fourteen, and had rarely been regular. At first too long between periods, then regular for two years, then again going too long, and for the last year too free. Suffers a good deal at such times. Weight: The most she ever weighed was $109\frac{1}{2}$ pounds, at nineteen; then about 100 for some time, and since her first sickness 85 to 90. Appetite poor; bowels costive; sleep poor.

Family history: Father died at the age of sixty-seven of Bright's disease, complicated with throat and lung trouble, with cough and expectoration. Mother died at the age of sixty-one of abscess of the liver. In younger days had lung trouble. Father's father and mother, four of his sisters and eight brothers died of consumption. Mother's people generally healthy. No lung trouble, with the exception mentioned. Patient's own brothers, four, and sisters, two, all living. Two of the brothers have had lung trouble, and one has had hemorrhage. Both sisters have weak lungs, and are subject to cough. Such is the history of my patient, elicited when she came under my care.

After seven months' treatment with hypophosphites, etc., nothing had been gained. I now concluded to try the hypodermic injections of iodine and gold sodium chloride, and sent to Messrs. Parke, Davis & Co., for their preparations used and recommended by Gibbes and Shurly. I commenced with the iodine, 10 minims, containing $\frac{1}{12}$ grain. I may say here I had some trouble to induce my patient to try the treatment, and she only yielding after a great deal of talking and explaining. The iodine proved, as mentioned by the authorities quoted, very painful, and I found, as they found, the gluteal region the best place for the injections, causing less pain and irritation here than elsewhere. Steadily the dose was increased up to $\frac{1}{8}$ of a grain. I have not gone beyond this dose, although it is recommended to go as high as $\frac{1}{2}$ of a grain.

After two weeks' use of the iodine the gold solution was commenced, $\frac{1}{15}$ of a grain, and increased to $\frac{1}{8}$ of a grain, continuing the gold for two weeks, then giving the iodine for a week, then the gold for two weeks.

All other medicines were stopped. The inhalation of the chlorine gas has not, as yet, been tried in this case. The administration of the gold proved much less painful than the iodine. I should state that one

injection a day was given, the patient coming to the office every morning, and as she soon began to improve there was no trouble to get her to come regularly. So far there has been no abscess or inflammation of any moment, only little lumps remaining long after the hypodermic injections have been made, marking the places where they have been given. The preparations are very hard on hypodermic needles, and it is best to use platinum or gold-plated needles.

Now as to results. Although the patient experienced no particular effect directly after the administration of the drugs, nor, indeed, at any time, as far as she could tell, due to their physiological action, after a few days the cough lessened and finally ceased, she gained in strength gradually but surely, appetite improved, bowels became regular, and sleep more natural. The throat still pains her at times, but is much better, not giving her half the trouble it did before the treatment. Weight has increased five or six pounds. Though when these drugs were commenced she could scarcely ride to the office, a distance of only a mile and a half, a week ago she rode in a buggy to Xenia, some thirty miles, with comparatively little fatigue. Her whole appearance has changed for the better. Menstruation has become more natural, the physical signs show improvement, the râles are all gone, and the breathing is easier, fuller and more uniform. Temperature normal. This improvement is the more remarkable from the fact that the patient suffered from neuralgia, caused by bad teeth, and during most of the time has been under the treatment of the dentist; and many of us know how very trying that is.

I fully realize that it takes more than one swallow to make a summer, and also fully realize that my patient is yet far from safe, that many dangers beset the way to a perfect recovery; yet, so far I can truthfully say, I have rarely, if ever, seen a more satisfactory result from the action of medicine in all my medical experience. Certainly the hypodermic administration of iodine and chloride of gold and sodium deserves a fair trial at the hands of the profession in that dreadful, yet prevalent disease, pulmonary consumption.—R. T. Trimble, *Lancet Clinic*.

THE INFLUENCE OF HELENINE ON TUBERCULOSIS.—It has long been desired to find a drug capable of influencing the course of phthisis and tuberculous diseases generally. Many drugs have been introduced as specifics, but the results of further experience have never substantiated the statements of their original introducers. In the case of helenine, a substance derived from "inula helenium," the statements as to its action in tuberculosis seem to rest on a somewhat better and more scientific basis, and it was with a view of corroborating or confuting the statements made as regards its efficacy that the present research was undertaken.

Before giving my own results it will be as well to give a short epitome of the work already published on the question. In 1883, Valenzuela stated that he had used helenine with success in cases of tuberculosis, early phthisis, pertussis, etc. The drug was described by him as possessing a yellow color, of formula $C_{21}H_{35}O_3$, with melting point 72° C., and boiling point 140° C.

In 1885, Baeza stated that the drug diminished all the secretions, but especially those of the trachea and larynx. In small doses it prevented the sialagogue and diuretic action of jaborandi. He found, too, that 0.01 gramme, added to 1 liter of urine, prevented

putrefaction. In the same year Korab stated that tubercle bacilli suspended in sterile serum, to which had been added a small quantity of helenine, refused to develop, and the serum was incapable of inducing tuberculosis if injected into animals. He also stated that, if given in food, helenine acted as a preventive to infection by inoculation, and modified favorably already existing disease. The formula of the body employed by him was stated to be C_6H_8O .

In 1887 Marpmann wrote two important papers, dealing with both the chemical and therapeutic action of helenine. He stated that helenine consisted of two bodies, alantin and alantic acid, both of which were useful in medicine. Their administration caused death of the bacilli in tubercle nodules, and they also acted as expectorants. On man the drug had no injurious action; it was excreted mainly by the lungs, and after prolonged administration to phthisical patients the tubercle bacilli disappeared from the sputum. The excretion of urine and of uric acid was also increased, and it was suggested that the drug might therefore be useful in chronic gout.

It would seem from the above extracts that while all were agreed as to the efficacy of a substance obtained from elecampane root in tuberculosis, there was a considerable discrepancy as to the drug employed. It was very desirable, therefore, to make a preliminary chemical investigation as to the actual substances obtainable from the root. The literature on the subject is somewhat scanty, but we find in Phillip's *Materia Medica* the following data: "Crystals may be obtained by distilling or even gently heating the root, and are described chemically as the anhydride of alantic acid ($C_{15}H_{20}O_2$). This is accompanied by a small quantity of helenine (C_6H_8O), also crystalline, and of alantic camphor ($C_{10}H_{16}O$), which in taste and smell suggests peppermint. The anhydride obtained by distilling the root with water is impregnated with alantol, which may be separated as an oily liquid."

At Dr. Brunton's suggestion I communicated with Dr. Schuchardt, of Görlitz, who promised to prepare me substances as follows:

1. Helenine—melting point, 109 to 110° C. Formula, C_6H_8O . White crystalline needles.
2. Alantcamphor ($C_{10}H_{16}O$), a crystalline mass, melting point 64° C.
3. Alantic anhydride, crystalline, melting point 66° C.
4. Alantol, a yellow liquid.

Difficulties apparently arose, however, in isolating these substances in quantity, and up to the present I have only been able to obtain from him a supply of pure alantic anhydride.

I also made, with the aid of Mr. Ball, F.C.S., of the firm of Burroughs, Wellcome & Co., to whom my best thanks are due, an attempt to isolate some of the above substances. By sublimation we obtained, as a first product, a camphor-like body, which sublimed in plates, and melted at 60° C. to 62° C. On raising the temperature somewhat higher, a substance sublimed over identical in appearance with the crystals obtained on exposing turpentine to sunlight for a prolonged period. These crystals were needle-shaped, with a melting point at 68° C. to 69° C.

During the sublimation of the first body it was noticed that while this collected in the "head" of the apparatus, another substance collected in the form of crystals in the receiver. We believe that this will prove to correspond with the substance alantic anhydride, and to differ from "helenine" only in the fact that it is a less oxidized body. These substances

were all soluble in fats, spirits, ether, chloroform and petroleum ether.

During the distillation of the powdered root with alkaline water, a volatile liquid, possessing a very pungent odor, passed over in small quantities into the receiver and dissolved in the water. We have not been able to obtain any of this substance in the pure state, or to separate it even by the aid of a freezing mixture. We assume, however, that this corresponds with the alantol of other workers. Lastly, we have extracted a yellow resin from the residue left in the retort.

The only substance we have been able to prepare in large quantities is that which we consider to be alantic anhydride, and it is only by a very laborious process of fractional sublimation that we can obtain this substance of a constant melting point of 66° C. The other bodies were, however, isolated in quantities sufficient for laboratory experiments.

My subsequent experiments have been carried out with all of the above substances, and with Schuchardt's "alantsaure anhydride." I first directed my attention to the influence of these substances on the growth of the tubercle bacillus, and of some other micro-organisms in artificial culture, mixing them in various proportions with the nutrient media prior to inoculation with the organism. In this way I have found that any of the crystalline bodies will prevent the growth of the tubercle bacillus, if present even in the proportion of 1 in 10,000. I have confirmed this with various nutrient media, but the result is the same whether I use solidified blood serum, agar-agar glycerine mixture, broth with glycerine, broth with solid egg albumen, or a solution of alkali albumen obtained from blood serum (sheep) or from egg albumen. All of the above, without the addition of the elecampane derivative, form excellent media for the cultivation of the tubercle bacillus.

I have further found, with the liquid media containing helenine, that these, even if containing large quantities of bacilli in suspension, are incapable of producing tuberculosis, or even an enlargement of the nearest lymphatic glands when inoculated into healthy guinea-pigs. Inoculations of normal nutrient media with these cultures also fail to produce any growth. I may, therefore, conclude that the drug, even in the strength of 1 in 10,000, is fatal to the tubercle bacillus, and my results in this particular fully corroborate those of Korab.

I have incidentally attempted to grow other micro-organisms on the same medicated media, and it may be interesting to state here the results obtained. In every case I employed solid media, to which were added what is probably a mixture of helenine and alantic anhydride. I found that the more luxuriant and rapidly-growing micro organisms were practically unaffected in their growth by the presence of even 1 part of the drug in 1,000 of the nutrient medium. On the other hand, the streptococci (for example, *st. pyogenes*, *st. erysipelatis*) and some bacilli (for example, *bacillus typhosus*, *bacillus mallei*) refuse to grow on these prepared media.

Having established, then, that helenine and the associated bodies have a real action on the tubercle bacillus, I next desired to find out the influence of the drug on the tuberculous process in animals. The lines on which I have worked are as follows:

1. To administer the drug to guinea-pigs during prolonged periods, and subsequently to inoculate them with tuberculous material, control inoculations being made with normal animals.

2. To prepare the animals by feeding them on helenine; to inoculate these, continuing the feeding with the drug.

3. To inoculate animals with tuberculous matter, and then to commence feeding them with helenine.

Owing to the very slight solubility of all the elecampane derivatives I was obliged to use them in the solid form, and I found it most convenient to administer the dose either in the form of a pill, or, better still, as a small tablet, which was kindly made for me by Messrs. Burroughs, Welcome & Co. These tablets were very compact, disintegrated fairly readily, and ensured accuracy of dose. The preparation used was always either the alantsaure anhydride of Schuchardt or the mixture of helenine with alantic anhydride (of a somewhat higher melting point) prepared by Mr. Ball.

Without entering into details as to the result in each case, I may state that, however great the daily dose of helenine, no ill effect was produced by the drug itself; but in no case am I able to say that the course of the disease following inoculation with virulent material was arrested. That it was considerably retarded, however, I think there can be no doubt. This is shown both by the date of death and also by the condition of the organs, as seen under the microscope. In the first series of experiments I used tuberculous sputum for inoculating the animals. Only three animals were used in this case; the control died of acute tuberculosis in fifty-seven days; the other two died, one after sixty-seven days (acute), the other after ninety-three days (caseation and cicatricial tissue very abundant).

Series 2 was inoculated from the liver of the previous control. The dates of deaths were as follows:

Guinea pig, 1, control.	Died in 109 days.
Guinea-pig, 2, control.	Died in 161 days.
Guinea-pig, 3, fed.	Died in 137 days.
Guinea-pig, 4, fed.	Killed in 136 days.
Guinea-pig, 5, fed.	Died in 179 days.

The last two animals presented nothing but very chronic lesions; the nodules were considerably cicatrized, and the lymphatic glands were much enlarged and fibrous. Very few bacilli were found in the tissues of any of the "protected" animals.

Series 3 consisted of ten animals, three being controls, and seven protected by feeding with helenine.

Guinea-pig, 1, control.	Died on the 48th day.
Guinea-pig, 2, control.	Died on the 54th day.
Guinea-pig, 3, control.	Died on the 43d day.
Guinea-pig, 4, fed.	Died on the 62d day.
Guinea-pig, 5, fed.	Died on the 81st day.
Guinea-pig, 6, fed.	Died on the 29th day.
Guinea-pig, 7, fed.	Died on the 89th day.
Guinea-pig, 8, fed.	Died on the 70th day.
Guinea-pig, 9, fed.	Killed on the 121st day.
Guinea-pig, 10, fed.	Died on the 135th day.

This series seems to show that the animals derived a considerable amount of protection from the helenine feeding. They were inoculated from human sputum, and the death of guinea-pig No. 6 was probably due to accidental infection. The lesions in the six protected animals exhibited appearances identical in character with those observed in the previous series, the microscopic appearance of the lungs showing none but old cicatrized tubercles with very few bacilli; in fact, a careful search was necessary to discover their existence in several cases.

Series 4 consisted of five "protected" animals and three controls. They were inoculated from a first culture on serum obtained from one of the controls of the last series. They received daily doses of the

drug in pill form, and some of the powdered root was mixed with their food. The atmosphere of the room in which they were kept was also impregnated with eucalyptus oil. The result was as follows:

Guinea-pig, 1, control.	Died in 48 days.
Guinea-pig, 2, control.	Died in 59 days.
Guinea-pig, 3, control.	Died in 44 days.
Guinea-pig, 4, control.	Died in 89 days.
Guinea-pig, 5, control.	Died in 106 days.
Guinea-pig, 6, control.	Died in 99 days.
Guinea-pig, 7, control.	Died in 135 days.
Guinea-pig, 8, control.	Died in 120 days.

The result is thus not markedly better than in the previous series.

Series 5. Six animals were inoculated in this series. Instead of feeding them with the drug, I administered it dissolved in olive oil and injected it deeply into the subscapular fossæ. At first I had considerable difficulty from the fact that the injections produced local suppuration. I attribute this to the fact that the syringe used was difficult to sterilize, and thus allowed of the introduction of micro-organisms which produced the suppuration. Since I have adopted the syringe recently described by me in the *British Medical Journal*, I have had no difficulty from this cause. The oil is easily absorbed, and the animals remain perfectly well under the treatment. Results were as follows:

Guinea-pig, 1, control.	Died in 54 days.
Guinea pig, 2, control.	Died in 36 days.
Guinea-pig, 3, control.	Died in 70 days.
Guinea-pig, 4, injected.	Died in 76 days.
Guinea-pig, 5, injected.	Died in 42 days.
Guinea-pig, 6, injected.	Died in 99 days.

These results were not entirely satisfactory, so it occurred to me to use, instead of a very virulent bacillus, one which had been attenuated somewhat by cultivation on glycerine agar-agar, but which was still capable of producing death in a normal animal. Here I met with the difficulty that it is very easy to render the tubercle bacillus so weak that it is incapable of producing anything but hardness of the lymphatic glands nearest the seat of inoculation. However, by using the same tube for the whole series I was able to obtain trustworthy results.

Series 6. Eight guinea-pigs, 4 of which were controls:

Guinea-pig, 1, control.	Died in 93 days.
Guinea-pig, 2, control.	Died in 108 days.
Guinea-pig, 3, control.	Died in 130 days.
Guinea-pig, 4, control.	Still living.
Guinea-pig, 5, injected.	Still living.
Guinea-pig, 6, injected.	Still living.
Guinea-pig, 7, injected.	Died in 142 days.
Guinea-pig, 8, injected.	Still living.

It is now more than six months since these were inoculated. The animals now living presented soon after inoculation an enlargement of the lymphatic glands of the groin, with in one case local suppuration. This has disappeared, and the animals are now apparently quite healthy. I am repeating these experiments, which will, I think, far more nearly represent the kind of infection which takes place in the human subject than do those in which inoculation is made with a virus capable of setting up an acute military tuberculosis. The results as far as they go certainly tend to show that helenine has a real protective action against the disease.

I may add that nearly all the animals used in the above experiments were bred by myself, and kept under observation in the country for some time before use. I was thus able to choose animals which were in every way healthy, and which corresponded fairly

nearly in age. This would seem to be a great consideration in experiments on a disease, the duration of which depends so much on individual receptivity.

As regards the use of helenine in the human subject, I fear I have little to say. The great drawback to its extensive trial lies in the cost of the preparation. Dr. V. D. Harris kindly made use of it in some cases under his care at Victoria Park, but he employed only small doses (6 gr. per diem), and I maintain that it will be necessary to use considerable quantities in order to obtain any appreciable effects. I have myself four cases now under observation, but they have not been taking the drug for a sufficient length of time to allow me to eliminate the effect of change of weather, etc. It will be better for me to defer any account of these till I have more definite information.

I have brought these results before the Association at this time in the hope that some others who have more ample opportunities than myself may be perhaps induced to make trial of helenine in early phthisis. I do not think I am justified in saying that any one of the constituents of elecampane root possesses greater value than the mixed product; probably this would meet all the requirements of clinical experiment.

The above research was carried out under the direction and at the cost of the Therapeutic Committee of this Association. I owe my very best thanks to Dr. Lauder Brunton, F.R.S., who has throughout given me very valuable suggestions and help, and in whose laboratory at St. Bartholomew's Hospital the experiments were mostly carried out.

—Bokenheim, *Brit. Med. Jour.*

FRENCH NOTES.

A. E. ROUSSELL, M.D.

TREATMENT OF PERTUSSIS BY THE VAPOR OF IODOFORM.—M. Chibret declares that he rapidly arrests the paroxysms of pertussis in children by powdering their ears with pulverized iodoform.

POWDER FOR INSUFFLATION IN OZENA.—

R.—Salol.....	75 grains.
Boric acid.....	45 “
Salicylic acid.....	7½ “
Thymic acid.....	3 “
Pulverized chalk.....	120 “

M.—To be used as a snuff after having cleansed the parts with carbolized water.

A TREATMENT FOR THE LARYNGITIS OF SINGERS (M. Faulkner).—This treatment, according to the author, is intended for the acute laryngitis of persons who fatigue their voice.

A purgative is administered, we then use inhalations of cocaine, spray 1 per 100, and give internally a mixture of ammonia and tincture of aconite.

From time to time the patient should make use of the following pastille:

R.—Morphine.....	$\frac{1}{60}$ grain.
Hydrochlorate of cocaine.....	$\frac{1}{60}$ “
Tincture of aconite.....	3 drops.
Powdered althæa.....	4 grains.
Sugar, q. s.	

For one pastille.

When the acute symptoms have subsided, we prescribe strychnine, in doses of $\frac{1}{120}$ grain, before meals. The author even repeats this dose at the time that the actor enters *en scene*. The action of the strychnine is efficacious, nevertheless we can understand that this medicament should be used with caution.

—*La Médecine Moderne.*

TREATMENT OF CYANOSIS IN CHILDREN.—We have reference to cyanosis consecutive to congenital malformations of the heart. This affection is not incompatible with an existence of twenty or even thirty years, if the patient follows certain hygienic rules, and is placed under appropriate treatment. According to Jules Simon there are two indications to follow in a hygienic point of view:

1. Avoid all that which will increase the action and fatigue of the heart.

2. Assist, by proper exercise, the development of the child predisposed by his affection to remain debilitated.

Avoid violent exercises—gymnastics, fencing, horse-back riding—employ only with caution hydrotherapy. Dry frictions and daily massage. Take great precautions against taking cold, as bronchitis entails serious accidents of asphyxia, etc. The judicious choice of climate, employment of dry frictions render, under this head, great service. The digestive functions should be watched, to avoid indigestion and prolonged constipation.

The tendency to apathy and somnolence presented by children with congenital malformations of the heart, should be respected up to a certain point. Exercise, particularly in the open air, should be permitted, in moderate extent, so as to not favor the natural tendency to tuberculosis. Prolonged sleep or a sojourn in bed is to be allowed.

Cold air irrigations are apt to easily produce ulcerations, which are obstinate, by reason of the circulatory troubles, consequently, the use of counter-irritants in pulmonary troubles should be used with a certain reserve.

The medicinal treatment consists especially in the use of digitalis, which is given at intervals for several days when the heart weakens. We should not exceed the dose of 15 drops of a mixture of equal parts of tincture of squills and tincture of digitalis in a child of three years. At the end of eight or ten days we suspend the medication.

Regarding tonics, we give very small doses of iodine, being careful to insure long periods of rest. By prescribing the wine of quinine diluted with water, after meals, we avoid constipation and irritation of the stomach. Arsenic and phosphate of lime may be of service. We will, in a general way, vary the preparations, and suspend treatment for a more or less extended period.

The employment of the medication and observance of the rules laid down, will insure to these children a tolerably long life, and in a fair number of cases a tolerable existence. But we should be very reserved as regards prognosis, and warn the family of the persistency of the disease, notwithstanding the amelioration obtained.—*Revue de Thérapeutique.*

Medical News and Miscellany.

ONE person in nine is left-handed.

FRANCE utilizes over 1,000 of her 1,100 mineral springs.

THE Berlin Teachers' College has been closed by a gripe.

DR. JOHN M. KEATING has located permanently at Colorado Springs.

THE largest family yet: Of 44,000 female teachers in France, 11,000 are sisters.

RATTLESNAKE oil is said to be worth \$16 per ounce; at least this is the market price.

A NEW and real mean invention threatens to do away with the hello-girl entirely.

CATS cannot live in the rarefied air of Leadville. Rats enjoy a perpetual pic-nic there.

BUCHAREST is afflicted with an epidemic of influenza complicated with a skin eruption.

THE ashes of rice-straw are recommended by a Japanese surgeon as a surgical dressing, as absorbent and aseptic.

THE female doctors at the Philadelphia Hospital are exceedingly popular with their patients. It is said that the whole ward lights up when Dr. Janney enters it.

DURING the week ending October 31, there were reported in Philadelphia 117 cases of diphtheria with 39 deaths; and for the previous week, 108 cases and 39 deaths.

A CONNECTICUT man, evidently affected by the epidemic for daring surgery, attempted to relieve his cardiac rheumatism by cutting into the organ with his penknife.

JAPAN had 41,405 doctors at the end of 1889, being one to 968.61 of population. Besides this, she suffered under 32,111 midwives, 3,817 apothecaries, 8,959 druggists, and 573 hospitals.

A KEELEY patient at White Plains, after four or five days' treatment, developed delirium tremens and went gunning for the neighbors. Things like that will get the Keeley institutes disliked.

INSTEAD of iron-clad pies and gutta-percha sandwiches, travelers in Japan find the railroad lunch counter supplied with sliced lotus roots, burdock roots, lily bulbs, ginger shoots, and pickled green plums.

THE Philadelphia Board of Health has instituted an inquiry into the sale of the milk of tuberculous cows, and the University of Pennsylvania at once sets to work to capture the job for the Veterinary Department.

THE Philadelphia Hospital incubator has scored two successes recently; one with a colored baby found in a shoe box in the street; and the other, an infant removed by the Cæsarean cut from a young colored girl.

THE harder the wood, the more injurious is the inhalation of its dust by wood-workers. This can easily be made to harmonize with the germ theory; when we recollect that hard woods contain more substance, *i. e.*, more germs, than soft.

THE *New York Herald* says that "a creditable examination in school hygiene should be an indispensable condition of any person's appointment to the position of teacher." Just include school directors in the same category and we agree.

A PNEUMATIC inner sole or sock for boots and shoes has been brought out to confer great benefits upon people who have tender feet, etc. It is made of hollow India-rubber, inflated with air or gas under pressure, the external protective covering being canvas, linen, skin, or other suitable material, to adapt it to withstand the internal pressure of the compressed air or gas.

It will not be needed: "We intend to establish a dipsocura at the World's Fair," said Mrs. Dr. Mary A. Seymour, State Treasurer of the Non-partisan Woman's Christian Temperance Alliance, "for the purpose of illustrating that dipsomania is a disease and can be cured."

THE RUSH MONUMENT.—Benjamin Rush, the patriot physician of the Revolution, is not likely to be forgotten. The annual appeals for funds to build him a monument will keep his memory green in the minds of the profession, even if the monument is never built.—*Country Doctor*.

It is curious to note the slow but steady growth of the profession towards a comprehension of the import of intestinal antisepsis. Ferreira pronounces very favorably upon the treatment of yellow fever by salol. Courage, gentlemen, and perseverance! You will reach the sulphocarbolates by and-by.

THE TEMPERATURE OF DRINKS.—A writer in a German paper gives the following as the proper temperatures for different sorts of beverages: Water, 54°; seltzer water and beer, 57° to 60°; red wine, 62° to 66°; white wine, 60; champagne, 46° to 50°; coffee, 73° to 79°; beef-tea, 100° to 125°; milk, 60° to 64°; hot milk, 93° to 95°.

THE great Pepper Free Library is following closely the footsteps of the usual Pepperian project. It is designed on a scale that renders the bequest of the late George S. Pepper totally inadequate, and subscriptions are requested, as well as annual contributions, for which the donors receive nothing.

Any one who wishes to enhance the glory of the late George S. Pepper, may do so by contributing funds, to enable the Trustees to do extravagantly the work Mr. Pepper left ample means to do properly.

In the *Medical Brief*, W. H. Gray speaks of a case presenting these symptoms: Chronic diarrhoea; tympanitis; pains in abdomen; face pale and thin; appetite variable; general debility, and frontal headache. The administration of tannicides brought away three tape-worms of an incredible length.

It is not usual for these parasites to give rise to such marked symptoms as in this case. The frontal headache is so generally symptomatic of ptomaine poisoning, that it raises a curious question as to whether these worms secrete a toxine.

SEPTIC ENDOCARDITIS.—In *Practice*, J. T. Smith describes a case of septic endocarditis. Six hours after parturition the patient had a chill, with pulse 160, temperature 104°; soreness of legs; no venous inflammation, or pelvic tenderness, but sick stomach and delirium. After four days the fever abated, and in ten days convalescence was established. Three days later another chill occurred, followed by a week's illness of the same character. Then a third chill, with symptoms more marked than previously; temperature 105°; pain in left inguinal region; tender abdomen, and some tympanites. Three days later she complained of cardiac distress, and suffocative sensations. The pain and dyspnoea were increased by motion. The heart was tumultuous. After many days improvement began, but the heart symptoms remained, and she grew thinner and weaker, with scanty urine and colliquative sweats. The dyspnoea increased. He then began the use of gold and manganese, following Blake's method in tuberculosis. Two drops of Lord's solution were injected hypodermically every other day. This was continued for one month, and the case ended in complete recovery.

WEEKLY Report of Interments in Philadelphia,
from October 24 to October 31, 1891:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess of brain.....		1	Inanition.....	1	13
Anæmia.....	1		Inflammation bladder.....	1	
Aneurism of the aorta.....	1		" brain.....	1	12
Alcoholism.....			" bronchi.....	6	4
Apoplexy.....	12		" kidneys.....	7	
Asphyxia.....		1	" larynx.....	7	1
Asthma.....	2		" lungs.....	13	12
Bright's disease.....	15		" peritoneum.....	6	
Burns and scalds.....		2	" pleura.....	2	
Cancer.....	13		" s. & bowels.....	3	7
Casualties.....	9		" spine.....	1	
Cerebro-spinal meningitis.....	1		Intussusception.....	1	1
Congestion of the brain.....	1	4	Jaundice.....	1	2
" lungs.....	6	3	Lupus.....	1	1
" bowels.....			Locomotor ataxia.....	1	
Childbirth.....	1		Malformation.....		10
Cholera infantum.....		5	Marasmus.....	1	1
Cirrhosis of the liver.....	2		Neuralgia of the heart.....	2	
Consumption of the lungs.....	42	2	Obstruction of the bowels.....	2	1
" bowels.....	1		Old age.....	15	
" throat.....			Paralysis.....	3	
Convulsions.....	2	20	Pyæmia.....	1	
" puerperal.....	1		Rheumatism.....	2	1
Croup.....	18		Shock, surgical.....	1	
Cyanosis.....	4		Sclerosis of the spine.....	1	
Caries, spinal.....	1		Scrofula.....	1	1
Debility.....	2	2	Septicæmia.....	4	
Diphtheria.....	40		Softening of the brain.....	5	
Disease of the heart.....	25	3	Suffocation, illuminating gas.....	1	
" liver.....	2		Suffocation.....	2	2
" knee joint.....	1		Suicide, shooting.....	2	
Dropsy.....	3		Tumor, abdominal.....	1	
Dysentery.....	1	1	" of brain.....	1	
Erysipelas.....	1		" of kidneys.....	1	
Enlargement of the heart.....	3		Ulceration of the bowels.....	2	
Fever, scarlet.....	6		Uræmia.....	3	
" typhoid.....	5	2	Whooping cough.....		1
Hæmorrhage, umbilical.....		2			
Hernia.....	1		Total.....	243	191

EDSON, who likes to say striking things, and who sometimes says good ones, states that "during over nine years' service in the health department of New York I have never seen a case of small-pox in a person who had been successfully vaccinated within five years, and the number of cases I have seen mount into the hundreds. During that period I have seen only one inspector of contagious diseases contract small-pox, and he was the only inspector who disbelieved in vaccination, and refused to have it performed on himself."

HYOSCINE.—Sighicelli has employed this drug in the form of the hydriodate. The dose used was a quarter to one milligramme subcutaneously. He is of opinion that one milligramme is the maximum dose that can be given with safety, and this quantity should be arrived at gradually. He considers the drug quite unsafe in the case of patients with cardiac troubles, as he finds it slows the pulse, lowers the arterial tension, and may produce paralysis of the heart. Serger, who used sulphate of hyoscine, found that it produced complete muscular relaxation, violent vertigo, inability to speak or to stand; in short, so much prostration and distress that it had to be discontinued. Such are, no doubt, the symptoms produced by a large dose of hyoscine, but it is certainly unusual to get such effects from the ordinary medicinal dose.

PENTAL.—The name of the newest anæsthetic is pental. Its inventor is Professor Von Mering, Director of the Medical Polyclinic in Halle. He observed, four years ago, that the tertiary amyl-alcohol produces a soporific effect, and since then it has been in use as a hypnotic. It occurred to him that the amyl corresponding to amyl-alcohol might be fitted for anæsthetic purposes, and this substance has now, after several vain attempts, been obtained. Its chemical composition is (CH₃)₂CCHCH₃, and Mering calls it pental, owing to the circumstance that it contains five carbon atoms. It is very volatile and easily com-

bustible. It can be administered exactly like chloroform, and the quantity required each time costs about sixpence. Anæsthesia sets in after three or four minutes, rarely later. It is not deep, but suffices to render small operations, such as the extraction of teeth, painless. It is neither accompanied nor followed by any unpleasant effects.—*Lancet*.

SOME beautiful specimens of tiny incandescent lights are now made for surgical uses. The smallest lamp manufactured is only 3 mm. in diameter and 5 mm. long. In medical practice where electricity is acquiring an ever-growing application, this lamp, owing to its small size, has made it possible to thoroughly inspect the bladder and stomach, into which it can be introduced. This application was illustrated at the Centennial Exhibition by a fish swimming in an aquarium with a lamp brightly glowing in its stomach. Another adaptation of the small incandescent lamp is to the copper rods which fit the handles or sockets now almost universally employed in connection with electric cauterizing knives. A doctor working with one of these knives can, in an instant, replace it by a lamp, should this become necessary, for instance in cases of mouth disease. The tiny lamp mentioned is also mounted on a laryngoscope, and is thus of great value in the treatment of infectious diseases.

THE unbounded faith in which human beings seem to place in new drugs, even in those in which little or nothing is known, is astonishing. Those we have are unhappily capable of affording relief in but a very small proportion of the cases we are called upon to treat, yet the cry is still for more! From the laboratory of the Western scientist and from the swamps of savage races, a steady current of new and untried drugs pours in, most of which are forgotten before even their names are known. At the opening ceremony of the session at the School of Pharmacy, Mr. Gainsford Bruse, M.P., expressed regret that so little had been done to examine and report upon herbs said to possess remedial properties. He mentioned that there were at the present time more than a hundred herbs at Kew that had recently been discovered, and were believed to possess medicinal virtue, and he seemed to anticipate that great benefit to the science of medicine would accrue from their being placed in the market. Would that people could be made to understand that we are suffering from a plethora of remedies, indeed, that our difficulty is to find diseases on which to use them. We have plenty of acquaintances and few friends among drugs, and what we want is the "friend in need."—*Hosp. Gaz.*

SEPTEMBER BULLETIN OF THE NEW YORK STATE BOARD OF HEALTH.—The month of September, compared with the preceding month, shows a diminished infant and zymotic death-rate, the chief diminution being in diarrhoeal diseases, from which cause there were about 1,000 fewer deaths; there was also a small diminution in scarlet fever and measles. From malarial diseases there was a moderate increase. Typhoid fever increased from 171 to 287 deaths, and diphtheria from 266 to 334 deaths. The number of deaths attributed to diseases of the nervous system is considerably less, and about one-third fewer deaths occurred from accidents, chiefly drowning. The total number of reported deaths from all causes is 1,000 less than in August. Compared with September, 1890, the total reported mortality is 1,000 greater, the increase being, among local diseases, in deaths from diseases of the digestive and nervous systems, and from zymotic diseases there were about 4 per cent.

more deaths, the increase showing, relatively, in diarrhoeal diseases, diphtheria, typhoid fever and scarlet fever. Typhoid fever epidemics have been reported from Auburn, Laurens and Russel, and a considerable prevalence is noted in localities in the Maritime district and along the Mohawk valley. Diphtheria has been unusually prevalent, epidemically, in numerous localities, and there were 100 more deaths in the State from this cause than one year ago. In thirty cities, with an aggregate population of 3,657,500, the average annual death-rate is 22.10 per thousand; 2.44 per cent. of all deaths were from typhoid fever, and 4.04 from diphtheria. In forty-seven villages with 417,000 population, the death-rate is 19.80; the percentage of deaths from typhoid fever is 4.90, and from diphtheria 2.74. Of 1,886 deaths occurring in rural towns, 3.92 per cent. were from typhoid fever, and 2.12 from diphtheria.

THE HOSPITALS OF PHILADELPHIA.

[CONTINUED FROM LAST WEEK.]

PENNSYLVANIA HOSPITAL, WITH INSANE DEPARTMENT.

Location: Hospital, Eighth and Spruce streets; Insane Department, Market street and Haverford avenue, from Forty-second to Forty-ninth street. Age: Hospital, one hundred and forty years; Insane Department, fifty years. Number of beds: Hospital, 225; Insane Department, 400; wards: Hospital, 7. Patients received: Acute, chronic (some), and venereal cases, alcoholism, adults and children. Patients not received: Contagious cases. Terms per week: \$7 (alcoholism extra). Actual cost per week per patient: \$7.98. Visiting hours: Monday, Wednesday, and Friday, 2 to 4 P. M. Resident physicians: Male, 4; appointed; term of service, twenty months. Nurses: Male, 8; female, 30; pay, \$10 to \$12, and \$20; term of service, two years; training school, yes; kind of nursing taught, general; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. Clinics: Kind, medical and surgical; number, 2 per week; days, Wednesday and Saturday; hours, 10 A. M. to 12 M.; duration of clinics, October to May. Instruction for students: Clinics, yes; ward classes, no; terms, free. Maternity cases not taken. Dispensary work: Charge, free; departments, medical, 11 A. M. to 12 M.—surgical, 10 to 11 A. M.—gynecological, Monday, Wednesday, and Friday, 12 M.—nervous, Monday and Friday, 3 P. M.—eye, ear, and throat, 2 P. M.; average number of patients, 1,982 per month. Names of physicians of hospital.—Physicians: Drs. J. M. Da Costa, Morris Longstreth, Arthur V. Meigs, Morris J. Lewis; Surgeons: Drs. William Hunt, Thomas G. Morton, John H. Packard, John Ashhurst, Jr.; Pathologist, Curator, and Microscopist: Henry M. Fisher, M.D. Out-patient Department.—Physicians: Drs. Henry M. Fisher, John J. Owen, Caspar Morris, Samuel B. Shoemaker; Surgeons: Drs. Wm. Barton Hopkins, Richard H. Harte, Joseph M. Fox, Chas. B. Penrose; Eye, Ear, Throat, and Nose: George C. Harlan, M.D.; Gynecological Department: T. Hewson Bradford, M.D.; Mental and Nervous Diseases: Drs. Albert R. Moulton, Henry B. Nunnemaker, Wm. H. Harrison, Eli E. Josselyn. Insane Department.—Physician-in-Chief and Superintendent: John B. Chapin, M.D.; Department for males: Assistant Physician, Edward N. Brush, M.D.; Second Assistant Physician, W. H. Harrison, M.D.; Department for Females: Assistant Physician, H. B. Nunnemaker, M.D.; Second Assistant Physician, E. E.

Josselyn, M.D.; Consulting Gynecologist, A. Victoria Scott, M.D. Remarks: Hospital has two ambulances, and emergency ward; percentage of mortality, 6.63.

PHILADELPHIA LYING-IN CHARITY.

Location: Eleventh and Cherry streets. Age: Sixty-three years. Number of beds, 37. Patients received: Diseases of women, and obstetrical cases. Terms per week: \$6 to \$20 (also, free). Actual cost per week per patient: \$2.25 (about). No special visiting hours. Resident physicians: Male, none; female, 1; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, none; female, 32; pay, \$5 per month; term of service, one year; training school, yes; kind of nursing taught, general as well as special; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. Clinics: Only surgical and maternity cases taken (see "Dispensary"). Instruction for students (see announcement of hospital). Maternity cases: At what time received, two weeks before labor (pay patients any time); terms, as stated. Dispensary work: Charge, free; departments, surgical and diseases of women, daily, 1 P. M.; average number of patients, 124 per month. Names of physicians of hospital.—Medical Staff: Consulting Obstetricians, Drs. Theophilus Parvin, William H. Parish, Barton Cooke Hirst; Consulting Surgeons, Drs. D. Hayes Agnew, John B. Roberts, William W. Keen; Visiting Physicians, Drs. Oliver Hopkinson, Jr., William Reynolds Wilson, George M. Boyd; Assistant Physicians, Drs. H. B. Martin, Frank L. Southern, J. Neely Rhoads, B. F. Hawley, W. W. Bulette, T. M. Tyson; Pathologist, W. F. Haehnlen, M.D. Remarks: Two hundred and thirteen deliveries in out-door service last year; hospital has an annex of sixteen beds.

PHILADELPHIA POLYCLINIC, AND COLLEGE FOR GRADUATES IN MEDICINE.

Location: Lombard street, between Eighteenth and Nineteenth streets. Age: eight years. Number of beds, 50. Patients received: Acute, chronic, and venereal cases, adults and children. Patients not received: Contagious cases, alcoholism. Terms per week: \$7 to \$10 and \$25. Actual cost per week per patient: \$8.40. Number of free beds: 6. Visiting hours: 2 to 3 P. M. (except Sunday; for rooms, after 12 M.). Resident physicians: Male, 1; female, none; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, none; female, 7; pay, none; term of service, one year; training school, yes; kind of nursing taught, general; diploma or certificate awarded, yes. Facilities for massage, all departments; electricity, all departments, all appliances; hydrotherapy, no special. Clinics: Kind, in all departments; days, every day; hours, 10 A. M. to 5 P. M.; duration of clinics, all year. Instruction for students: Clinics, as stated; ward classes, hospital attached to college; terms (see announcement). Maternity cases: At what time taken, any time; terms, no special. Dispensary work: Charge, for medicine and material; departments (the hours for treatment of walking cases are as follows): Diseases of children and obstetrics, 10 A. M.; Surgical diseases, 11 A. M.; diseases of the skin, 11.30 A. M.; medical diseases, 12 M.; diseases of the ear and of women, 1 P. M.; diseases of the throat and nose, and orthopedic diseases (deformities), 2 P. M.; diseases of the nerves and chest, 3 P. M.; diseases of the eye, and venereal diseases, 4 P. M.; medical and surgical diseases, 5 P. M.; aver-

age number of patients, 1,596 per month. Names of physicians of hospital.—Faculty: R. J. Levis, M.D., Surgery; J. Solis-Cohen, M.D., Diseases of the Throat; Charles H. Burnett, M.D., Diseases of the Ear; C. B. Nancrede, M.D., Surgery; John B. Roberts, M.D., Surgery; Charles K. Mills, M.D., Diseases of the Mind and Nervous System; Henry Leffmann, M.D., Chemistry and Hygiene; Arthur Van Harlingen, M.D., Diseases of the Skin; George C. Harlan, M.D., Diseases of the Eye; J. Henry C. Simes, M.D., Genito-Urinary and Venereal Diseases; B. F. Baer, M.D., Gynecology; Lewis W. Steinbach, M.D., Surgery; Thomas J. Mays, M.D., Diseases of the Chest; Alexander W. McCoy, M.D., Diseases of the Throat and Nose; H. Augustus Wilson, M.D., Surgery; Edward Jackson, M.D., Diseases of the Eye; Solomon Solis-Cohen, M.D., Clinical Medicine and Therapeutics; S. Weir Mitchell, M.D., LL.D., Diseases of the Mind and Nervous System; B. Alexander Randall, M.D., Diseases of the Ear; Edward P. Davis, M.D., Obstetrics and Diseases of Children; Thomas S. K. Morton, M.D., Surgery; Thomas J. Mays, M.D., Experimental Therapeutics; A. B. Hirsh, M.D., Adjunct Professor of General and Orthopaedic Surgery; A. W. Watson, M.D., Diseases of the Throat and Nose; Ralph W. Seiss, M.D., Otology; C. L. Bower, M.D., Surgery; J. Abbott Cantrell, M.D., Diseases of the Skin; M. Imogene Bassette, M.D., Electro-Therapeutics; Ross R. Bunting, M.D., Electro-Therapeutics; K. W. Ostrom, M.D., Massage and Swedish Movements; T. B. Schneideman, M.D., Refraction and Ophthalmoscopy; J. C. Heisler, M.D., Diseases of the Chest. Clinical Assistants: Applied Anatomy and Operative Surgery, Drs. Max J. Stern, John B. Turner, C. B. Williams; Diseases of the Mind and Nervous System, Drs. M. Imogene Bassette, Robert Coyle, Ross R. Bunting, J. Wm. McConnell; Diseases of the Eye, Drs. McCluney Radcliffe, P. N. K. Schwenk, Theo. B. Schneideman, R. J. Phillips, Walter J. Freeman, A. B. Frazee; Gynecology, J. S. Baer, M.D., Chief of Dispensary, H. C. Bloom, M.D., Chief of Clinic; Diseases of the Chest, John B. Turner, M.D., Chief of Clinic; Diseases of the Throat and Nose, Chas. A. Currie, M.D., Chief of Clinic, Drs. Thos. H. Helsby, Wm. E. Parke; Orthopaedic Surgery, Drs. H. C. Bloom, C. B. Williams, Mr. A. Gustaf Gefvert, Mechanician, Mr. K. W. Ostrom, Massage and Swedish Movements; Clinical Medicine and Applied Therapeutics, James Robinson, M.D., Chief of Clinic, W. B. Diefenderfer, M.D., Registrar, M. Jeanette Scott, M.D., Microscopist; Diseases of the Ear, Drs. Wm. S. Shimer, Ellwood Matlock, P. N. Eckman; Obstetrics and Diseases of Children, Drs. Frances E. Janney, M. B. McCollin. Remarks: Visiting Nurses' Society in connection with Obstetrical Department; hospital was built to combine in one institution the advantages of special hospitals.

ST. CHRISTOPHER'S HOSPITAL FOR CHILDREN.

Location: Lawrence and Huntingdon streets. Age: Fifteen years. Number of beds, 50; wards, 6. Patients received: Acute and chronic cases, children only. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: \$2. Actual cost per week per patient: \$2. Number of free beds: 5. Visiting hours: Thursday, 2 to 4 P. M. No resident physicians. Nurses: Male, none; female, 4; pay, \$3.50 per week. No facilities for massage, electricity, and hydrotherapy. No clinics. No instruction for students. Names of physicians of hospital.—Drs. W. H. Burnett, D. D. Stewart.

ST. CLEMENT'S HOSPITAL AND DISPENSARY.

Location: Cherry street, between Twentieth and Twenty-first street. Age: Five years. Number of beds, 24. Patients received: Acute and chronic cases, adults and children, any religion. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: \$7 (if able to pay). Visiting hours: Daily, 2 to 3 P. M. Resident physician: Male, 1; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, 1; female, 2; nursing done by All Saints' Sisters. No special facilities for massage, electricity, or hydrotherapy. Clinics (see "Dispensary"). No instruction for students. Maternity cases not taken (cared for at home). Dispensary work: Charge, 10 cents per prescription (if able to pay); departments, medical and surgical, daily—nose, throat, and ear, Monday and Thursday—gynecological, daily, 10 A. M. to 4.30 P. M., and 7 to 8 P. M. Average number of patients, 1,378 per month; average number of prescriptions, 1,327 per month. Names of physicians of hospital.—Physicians: Drs. D. B. Birney, T. A. Packard, Walker Chrystie, Judson Daland; Surgeons: Drs. Green, Bower, Shoemaker.

ST. MARY'S HOSPITAL.

Location: Frankford road and Palmer street. Age: Twenty-eight years. Number of beds, 100. Patients received: Acute cases, alcoholism (extra fees), adults and children. Patients not received: Chronic (a few exceptions), contagious, and venereal cases. Terms per week: Wards, \$4 to \$5; rooms, \$10; alcoholics, \$15. Visiting hours: Thursday and Sunday, 2 to 5 P. M. Resident physicians: Male, 3; female, none; how appointed, by examination; term of service, one year; pay, none. Nursing done by the Sisters of St. Francis. No special facilities for massage, electricity, or hydrotherapy. Clinics (see "Dispensary"). No instruction for students. Maternity cases not taken. Dispensary work: Charge, free; departments: Eye and ear, Tuesday, Thursday, and Saturday, 3 P. M.—throat, nose, and ear, Tuesday, Thursday, and Saturday, 1 to 2 P. M.—surgical, Monday and Thursday, 10 A. M. to 12 M.—medical, Thursday and Friday, 10 A. M. to 12 M.—diseases of women and children, Monday, Wednesday and Friday, 1 to 2 P. M.: average number of patients, 2,200 per month (visits). Names of physicians of hospital.—Physicians: Drs. J. J. Moylan, D. D. Stewart; Surgeons: Drs. J. P. Stritmattur, J. B. Deaver, Richard Harte; Diseases of Women: Chas. H. Willits, M.D.; Eye: L. F. Love, M.D.; Eye and Ear: W. J. Shimer, M.D. Remarks: Hospital has ambulance service.

ST. JOSEPH'S HOSPITAL.

Location: Sixteenth street and Girard avenue. Age: Forty-three years. Number of beds, 140; wards, 6. Patients received: Acute and venereal cases, alcoholism (extra for liquor), adults and children. Patients not received: Chronic and contagious cases. Terms per week: \$5 to \$15 (\$25 for rooms). Visiting hours: Daily (except Sunday), 2 to 4 P. M. Resident physicians: Male, 2; female, none; how appointed, by examination; term of service, one year; pay, none. Nursing done by the Sisters of Charity of St. Vincent de Paul. No special facilities for massage, electricity, or hydrotherapy. Clinics (only private held; see "Dispensary"). No instruction for students. Maternity cases not taken. Dispensary work: Charge, free; departments, eye, Monday and Friday, 2 P. M.—medical and surgical, Tuesday, Thursday, and Saturday, 12.30 P. M.—diseases of women and chil-

dren, Tuesday and Friday, 1 P. M.—throat, nose and ear, Monday, Tuesday, Thursday, and Saturday, 11 A. M.; average number of patients, 157 per month (new cases). Names of physicians of hospital.—Attending Physicians: Drs. Henry Morris, John J. Alexander, George Morley Marshall, M. T. Prendergast; Attending Surgeons: Drs. Robert B. Cruice, George McClellan, John H. Packard, Joseph Otto; Attending Gynecologist: John M. Keating, M.D.; Obstetrician: A. G. Bournonville, M.D.; Pathologist: Prof. Joseph Leidy, M.D., LL.D.; Consulting Physicians: Drs. William V. Keating, George R. Morehouse; Consulting Surgeons: Drs. John H. Brinton, Charles S. Boker; Consulting Physicians on Nervous Diseases: Drs. Chas. K. Mills, Hugo Engel; Resident Physicians: Drs. Joseph M. Spellissy, John W. Shaw. Out-patient Department.—Ophthalmic Surgeon: S. Lewis Ziegler, M.D.; Laryngological Surgeon: George Morley Marshall, M.D.; Surgeon: Ernest Laplace, M.D.; Gynecologist: Herman B. Allyn, M.D.; Physician: James T. Prendergast, M.D.; Physician and Surgeon in Charge: Robert B. Cruice. Remarks: Hospital has ambulance service, and all modern conveniences; cases of alcoholism, \$15 per week; extra for liquor.

UNIVERSITY HOSPITAL.

Location: Thirty-fourth and Spruce streets. Age: Sixteen years. Number of beds, 200. Patients received: Acute cases, venereal cases (not as free patients), alcoholism (not as free patients), adults and children. Patients not received: Chronic cases (not usually); contagious cases. Terms per week: \$7 in wards, \$14 to \$25 in rooms. Visiting hours: Wards, daily 3 to 4 P. M.; rooms, Sunday, 2 to 3 P. M. Resident physicians: Male, 6; female, none; how appointed, by competitive examination; term of service, fifteen months; pay, none. Nurses: Male, none; female, 40; pay, \$10 to \$14 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. Facilities for massage, ordinary; electricity, special; hydrotherapy, ordinary. Clinics (see University roster). Instruction for students: Clinics, yes; ward classes, daily, 1 to 2 P. M.; terms, free (to University students only). Maternity cases: At what time taken, two weeks before labor; terms, pay if able, if not, free. Dispensary work: Charge, for medicine; departments, medical, surgical, nervous and skin diseases, etc., daily, 12 M.—ear, throat, nose, gynecological, and eye, Tuesday, Thursday, and Saturday, 2 to 4 P. M.; average number of patients, 513 per month (new cases); average number of prescriptions, 1,382 per month. Names of physicians of hospital.—Medical Staff: Drs. D. Hayes Agnew, LL.D., William Pepper, LL.D., William Goodell, James Tyson, John Ashhurst, Jr., William F. Norris, Horatio C. Wood, Louis A. Duhring, Barton Cooke Hirst, J. William White, John Guiteras, De Forest Willard, Hobart A. Hare, B. Alexander Randall; Anæsthetizer: David B. Birney, M.D.; Curator: Judson Daland, M.D.; Assistants: Drs. H. R. Wharton, R. H. Harte, R. G. Curtin, J. P. Crozer Griffith, J. K. Mitchell, Judson Daland, Henry W. Stelwagon, F. X. Dercum, Wm. L. Taylor, Wm. Constantine Goodell. Dispensary Staff.—Medical: Chief, W. Howard Fussell, M.D.; Attending Physicians, Drs. S. W. Morton, A. C. Wood, T. Mellor Tyson, J. Howe Adams. Diseases of the Throat: Chief, Carl Seiler, M.D.; Assistants, Drs. J. Howard Reeves, N. A. Cashman, Chas. P. Grayson. Diseases of Children: Chief, Allen J.

Smith, M.D.; Attending Physicians, Drs. Thos. Westcott, H. B. Carpenter. Surgical: Attending Surgeons, Drs. Edward Martin, Geo. E. Shoemaker, Edmund W. Holmes, John B. Shober. Venereal: Chief, Thomas R. Neilson, M.D.; Assistants, Drs. H. M. Christian, Francis Rudderow. Orthopædic: Attending Surgeons, Drs. James K. Young, F. H. Milliken; Assistant, H. W. Cattell, M.D. Gynecological: Chief, Wm. L. Taylor, M.D.; Assistants, Drs. W. A. Carey, F. N. Yeager. Nervous Diseases: Chief, F. X. Dercum, M.D.; Assistants, Drs. Charles S. Potts, Wm. Evans. Eye: Chief, James Wallace, M.D.; Assistants: Drs. G. E. De Schweinitz, W. B. Jamison, D. M. Easter. Ear: Chief, J. M. Brown, M.D.; Assistant, L. J. Hammond, M.D. Skin: Chief, Henry W. Stelwagon, M.D.; Assistant, M. B. Hartzell, M.D. Remarks: Twenty-four endowed beds; patients admitted at 12 M., accident cases any time; hospital has ambulance service, isolation ward, and maternity pavilion.

WILL'S EYE HOSPITAL.

Location: Eighteenth and Race street (South Logan Square). Age: Fifty-seven years. Number of beds, 60 (will accommodate 100); wards, 4. Patients received: Eye cases only. Patients not received: Ophthalmia cases. Terms per week: Free. Actual cost per week per patient: \$5.57. Number of free beds: 60. Visiting hours: Daily (except Sunday), 10.30 to 11.30 A. M. Resident physician: Male, 1; how appointed, elected by City Trusts; term of service, six months (usually serve two terms or more); pay, none. Nurses: Male, 1; female, 2; term of service, indefinite; kind of nursing taught, not regularly; diploma or certificate awarded, no. Facilities for massage, no; electricity, yes; hydrotherapy, no. Clinics: Kind, eye; number, 5 daily; hours, 2 to 3 P. M. (except Sunday). Instruction for students: Clinics, yes; terms, free. Dispensary work: Charge, free; department, eye, 2 P. M.; average number of patients, 11,103 (last year). Names of physicians of hospital.—Emeritus Surgeons: Drs. T. G. Morton, W. Thomson, Geo. Strawbridge; Attending Surgeons: Drs. Frank Fisher, H. E. Goodman, A. D. Hall, G. C. Harlan, Edward Jackson, P. D. Keyser, W. W. McClure, W. F. Norris, Chas. A. Oliver, Samuel D. Risley; Assistants: Drs. S. Lewis Ziegler, Geo. T. Lewis, P. N. K. Schwenk, Theo. B. Schneideman, Conrad Berens, C. T. Seltzer, W. Zentmayer, Thompson S. Westcott, G. Oram Ring; Pathological Curator: W. F. Norris, M.D.; House Surgeon: M. W. Zimmerman, M.D. Remarks: Ordinary cases admitted from 2 to 3 P. M., accident, any time; hospital has 5 memorial beds, 15 endowed beds.

WOMEN'S HOMOEOPATHIC ASSOCIATION, OF PENNSYLVANIA.

Location: Twentieth street and Susquehanna avenue. Age: Nine years. Number of beds, 61; 18 private rooms, 5 rooms for two patients, 8 rooms for four patients. Patients received: Acute cases, chronic cases (with acute symptoms), adults and children. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: \$3 to \$25 (laundry work extra). Actual cost per week per patient: \$6. Number of free beds: 6 memorial (non-paying patients also taken). Visiting hours: any time. Resident physicians: Male, none; female, 3 (2 interne); how appointed, by election; term of service, one year for resident, six months for interne; pay, \$25 per month. Nurses: Male, none; female,

10; pay, one year, \$5 per month, two years, \$4 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. Facilities for massage, yes; electricity and hydrotherapy, none. Clinics: Medical, every day; surgical, eye, and ear, Monday, Thursday, and Saturday, 12 M. to 2 P. M.; gynecological, Thursday and Friday, 12 M. to 2 P. M. No instruction for students. Maternity cases: At what time taken, one to two weeks before labor; terms, \$3 to \$15 per week (also, charity cases). Dispensary work (see "Clinics"). Names of physicians of hospital.—Consulting Physicians and Surgeons: Drs. Chas. G. Raue, Edward Fornias, Malcolm Macfarlan, Walter M. James. Attending Board: Medical Department, Drs. Gustavus E. Gramm, J. Sperry Thomas, R. Straube, A.M.; Gynecological Department, Drs. Wm. F. Berkenstock, E. Newton Harpel, Emma T. Schreiner; Surgical Department, Drs. E. Newton Harpel, Duncan Macfarlan; Obstetrical Department, Drs. Jesse W. Thatcher, Eliza J. Remick, Anna E. Dumont; Dispensary Department, Eye and General Surgery, E. Newton Harpel, M.D.; Diseases of Women, Drs. W. F. Berkenstock, Flora E. Wasserman, Mary A. Cooke; General Dispensary, Drs. Gustavus E. Gramm, Urania Tyrrel, A. S. Geddes, Mary A. Cooke, Flora E. Wasserman, H. M. Sanborn; Dental Department, Alex. P. Long, D.D.S., Alice A. Graham, D.D.S. Special Staff: P. P. Wells, M.D., Brooklyn, N. Y.; W. P. Wesselhoeft, M.D., Boston, Mass.; Edward Rushmore, M.D., Plainfield, N. J.; Alice B. Campbell, M.D., Brooklyn, N. Y.; Phoebe D. Brown, M.D., Hilton, N. J.; Mary H. Baldwin, M.D., New York City; J. R. Earhart, M.D., Philadelphia, Pa.; Euphemia J. M. Sturtevant, M.D., New York City; Edmund Carleton, M.D., New York City; John V. Allen, M.D., Frankford, Pa. Remarks: Patients admitted Wednesday, 11 A. M. to 2 P. M.; emergency cases any time.

WEST PHILADELPHIA HOSPITAL FOR WOMEN.

Location: Forty-first and Parrish streets. Age: Two years. Number of beds, 20. Patients received: Acute cases, chronic cases (with acute symptoms), adults only. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: \$5 to \$7; rooms, \$10, \$15, and \$25. Visiting hours: Tuesday and Friday, 2 to 4 P. M. Resident physicians: Male, none; female, 1 (2 interne); term of service, one year; pay, none. Nurses: Male, none; female, 6; pay, \$10 per month; term of service, two years; training school, yes; kind of nursing taught, special; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. No instruction for students. Maternity cases: At what time taken, two weeks before labor; terms, as arranged. Dispensary work: Charge, 25 cents each prescription; departments, daily, 10.30 A. M. to 12 M., and 6 to 7 P. M.; average number of patients, 350 per month (visits); average number of prescriptions, 500 per month. Names of physicians of hospital.—Attending: Drs. Elizabeth H. Comly Howell, Ida E. Richardson, Elizabeth L. Peck; Ophthalmologist: Amy S. Barton, M.D.; Pathologist: Marie K. Formad, M.D.; Consulting: Drs. Anna E. Brommal, James B. Walker, Hannah Croasdale, W. W. Keen, John H. Musser, John B. Roberts; Clinicians: Drs. Elizabeth H. Comly Howell, Elizabeth L. Peck, Anna F. Sharpless, A. Helena Goodwin. Remarks: Chronic cases kept only six weeks; hospital for diseases of women and children.

WOMEN'S HOSPITAL, PHILADELPHIA.

Location: Twenty-second street and North College avenue. Age: Thirty years. Number of beds, 65 to 70. Patients received: Acute cases, adults (one ward for children). Patients not received: Chronic, contagious, and venereal cases, alcoholism. Terms per week: \$3 (for wards). Actual cost per week per patient: \$8 to \$9. Number of free beds, 25 (about). Visiting hours: Daily (except Sunday), 3 to 4 P. M. Resident physicians: Male, none; female, 1 (6 assistants); how appointed, by examination; term of service, one year; pay, none. Nurses: Male, none; female, 50; pay, \$10 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. Clinics: Daily (see college announcement). Instruction for students: Clinics, 10 weekly; ward classes, daily (only students of college admitted). Maternity cases: At what time taken, two weeks before labor; terms, free (ward, \$3, private patients, \$5 to \$30). Dispensary work: Departments, medical, surgical, gynecological, orthopaedic, nervous, skin, eye, ear, nose and throat, dental, daily, 8 to 9.30 A. M.; average number of patients, 593 per month. Remarks: The term of the physician in charge is not limited.

LADIES' UNITED AID SOCIETY OF THE METHODIST EPISCOPAL CHURCH IN THE CITY OF PHILADELPHIA.

Location: Lehigh avenue and Thirteenth street. Age: Twenty-six years. Applicants who have been members of the Methodist Episcopal Church ten years prior to application, five of which years they shall have been members of a Methodist Episcopal church in Philadelphia, and the payment of \$200 admission fee. No endowed beds. Visitors admitted every day. Physicians: Drs. Wm. H. Sanderling, A. Rusling Rainear, G. Maxwell Christine, Chas. Fulmer, W. W. Lamb.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending October 31, 1891.

HARVEY, HENRY P., Surgeon. Ordered to Receiving Ship "St. Louis."

FLINT, JAMES M., Surgeon. Detached from Smithsonian Institution, and to the U. S. S. "Miantonomah."

HEYL, T. C., Surgeon. Detached from Receiving Ship "St. Louis," and wait orders.

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The Times and Register.

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NEW YORK AND PHILADELPHIA, NOVEMBER 14, 1891.

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ELECTRICAL CONTACT FORCE.¹

By HENRY MCCLURE, M.D.,
CROWER, NORFOLK, ENGLAND.

THE subject I have chosen for my short paper is contact force at the junction of dissimilar metals or other substances. A definite view of what is going on at such a junction would clear the way to a better understanding of the complex phenomena of electricity.

At the junction begins the work, whether we take dissimilar metals immersed in a fluid, dissimilar metals immersed in air, or dissimilar substances or dielectrics brought together. I wish to treat the subject by the light of modern views of electricity, with the hope of clearing away some obscurities.

In the first place, it would be well to consider two dissimilar metals, zinc and copper, immersed in a fluid—acidulated water. Such water contains atoms of oxygen and hydrogen, free or potentially free, that is, actually dissociated or so frequently interchanging at random from molecule to molecule that the direction of their motion may be guided by feeble directive force. Each of these atoms in a free state possesses a charge of electricity, the hydrogen a certain amount of positive electricity, the oxygen twice that amount of negative.

Zinc and copper both attract oxygen, but zinc more than copper.

The free oxygen atoms begin moving up to the zinc, the free hydrogen atoms to the other plate. It is not necessary to assume that the plates are attracting all the atoms in the liquid far and near; all that

is necessary to assume is a force acting on the atoms in the immediate neighborhood of the plates. The zinc plate removes and combines with all the oxygen atoms within its range, but these will be replaced by others; by diffusion, these again by more distant ones, and so on, so we have a procession of oxygen atoms all through the liquid toward the zinc. All the atoms which reach the zinc neutralize a certain portion of its electricity by means of the charge they carry, and would so neutralize its attractive power on the charged oxygen atoms and everything would stop, but if the metals are connected by means of a wire, a channel for the escape of its electricity is provided, the circuit is completed, the electricity streams back by the wire and the procession goes steadily on. The electricity thus imparted to the copper neutralizes any repulsion it exerted on the charged hydrogen atoms, and makes them, in a similar way, begin a procession towards it, deliver up their charges to it, combine with each other and escape as a gas.

Helmholtz avoids the necessity for postulating any chemical (non-electrical) force between zinc and copper by imagining that all substances have a specific attraction for electricity itself, and that zinc exceeds copper and other common metals in this respect. He would thus think of zinc attracting not the oxygen itself, but its electric charge, and so would liken a battery cell still more completely to a Voltmeter, the polarization at the hydrogen-evolving plate he would account for by the attractions of hydrogen for negative electricity, and the consequent repugnance of the hydrogen atoms to part with their charge.

It is almost certain that the hydrogen and oxygen in a water molecule cling together by reason of the attraction between their opposite charges. The atoms in an electrolyte might be likened to charged pith balls driven along by their electric charges.

¹ Read at the meeting of the American Electro-Therapeutic Association.

We must not lose sight of the fact of the two opposite processions. There can be no procession of positive atoms through the liquid without a procession of negative ones. An electric current in a liquid necessarily consists of a flow of positive electricity in one direction, combined with a flow of negative electricity in the opposite direction. If this is proved to occur in a liquid it is probable it occurs everywhere. It certainly occurs in a Holtz machine. While the machine is being turned and the terminals connected, the glass plate acts as a carrier of positive electricity for one-half rotation and negative for the other half, the one traveling forward positively charged, the other backward negatively charged.

Plates of zinc and copper immersed in air are under the same chemical conditions as if they were immersed in water. But on the one hand water is a conductor and air an insulator. Until the plates of zinc and copper are made to touch, nothing happens in either case, because the chemical tendency is uniform all over both plates, though the attractive power of zinc for oxygen is strong it would be impossible for it to combine with many atoms, receiving their charges without becoming negatively charged as to repel them electrically as much as it attracts them chemically. But directly metallic contact is effected, all the oxygen atoms at this point are swept away, and a clear passage is opened from the zinc to the copper for the flow of electricity (the slight E. M. F. at the junction need not be considered at present), an immediate rush of negative electricity from zinc to copper, or of opposite the other way occurs. The copper becomes negatively charged, the zinc positively. So far, everything goes on just the same in air as in water.

What follows depends upon the conducting power of air and water.

In water you have the atoms of oxygen and hydrogen carrying their charges; in air nothing further happens except the slight electrostatic strain into which the air is thrown by the quantity of electricity accumulated upon the metals. Sir William Thompson has demonstrated this strain by means of a charged aluminum needle, placed near such a junction. Professor Lodge would almost completely ignore the Volta contact force, and would make the effective cause of the whole phenomenon both in water and air to depend upon the greater affinity of oxygen for zinc rather than copper, and if contact force at all, it would be a contact force between metal and air.

TRUE CONTACT FORCE.

If an electrical current is passed through a homogeneous piece of metal, heat is produced. This heat being quite independent of the direction of the current and is called irreversible heat. Joule has shown that it is proportional to the square of the current strength. But at a junction of two different substances, or even a junction of the substances in two different states, as difference of temperature, besides the irreversible heat produced by resistance, there is a reversible heat produced, which changes sign with the direction of the current so that the current one way actually tends to cool the junction instead of heating it.

This is an important fact in thermo-electricity. There is no doubt that there is something at the junction of the metals helping to propel the current along, doing work in fact, and consuming its own heat in the process. The vibratory motion in the molecules is getting used up in propelling electricity. More will be said on this subject in considering Rust's theory

of thermo electricity. A reversal of the current produces an extra amount of heat, which will be added to the irreversible or frictional generation of heat.

THERMO-ELECTRICITY.

Mr. Rust, of Leicester, has shown by a most extended series of experiments with couples composed of soft iron for the first, and zinc-antimony for the second couple, that though the iron is almost four times a better conductor of heat than the zinc-antimony, yet the first part of the zinc-antimony is heated before the iron. The explanation is, that zinc-antimony, having fewer atoms, takes up and loses heat sooner, and in such a couple it is not the molecules of the iron swinging in friction or vibratory stress against the zinc-antimony that causes the flow of electricity, but it is the molecules of the zinc-antimony swinging in friction or with vibratory stress against the molecules of the iron, and the greater the friction and flow of molecular vibrations we can get into play, so long as there is a continuous flow, and no counter E. M. F., or drag brought about, the greater will be the E. M. F. produced. He compares the molecules of the zinc-antimony and iron to two sets of cog wheels with their cogs interlocking, but only vibrating, not revolving. The zinc-antimony cogs, moving, the sooner act upon the series of iron cogs, therefore, the faster and stronger the Z. A. cogs run, the greater the friction upon the cogs of the iron, and the greater the E. M. F. produced. In water, we saw the two processions of atoms carrying their electric charges. Of course, such a procession would be impossible here, but one could conceive a charge being passed on from one vibrating or colliding particle to another, each would receive a charge from those behind it, and hand it on to those in front of it.

Mr. Rust postulates the following theory of thermo-electricity:

"The electro-motive force is proportional to the rate of speed at which heat passes the two junctions."

He has constructed an electrical furnace which has 6,000 of such small elements, and which give in actual work an E. M. F. of 96 volts, with a resistance of 11.5 ohms. I consider the zinc-antimony in these couples loses its heat soonest by doing work, that is, by propelling the current.

Atoms vibrating about a fixed point drive electricity with them, and will not achieve any propulsion. This might be considered the condition of an ordinary warm solid. But if atoms are made to move faster in one direction than in the reverse direction, moving forward quickly and backward slowly, such moving atoms would propel electricity, the force being greater on the forward journey than on the return. One could conceive the forward vibration propelling positive electricity, the backward negative, as we have seen in the case of the two processions in water and the two currents in the Holtz machine.

I consider true contact force at the junction of two dissimilar metals or substances to be of the nature of a static strain, heat in the thermo-couple being the means of breaking down such a strain and converting static into kinetic electricity. Wherever a static strain is broken down a current is produced.

We see true contact force in insulators as well as in conductors. The striking effects of frictional electricity are due to the same cause—contact, dissimilar substances—and by their contact electricity becomes transferred from one to the other, the violence of friction being mostly necessary to aid the transfer, so

that one becomes positive and the other negative. When such a train is broken down, as in disruptive discharge, a current is produced having electrolytic effects. This has been conclusively shown by Dr. Morton, of New York.

In good conductors, such contact forces are feeble; electricity seems to slip through the fingers of a metal, as it were, and the driving force it can exert is weak, while an insulator gets a good grip and thrusts it along with violence.

The metals do not all grip electricity alike. Iron is a metal whose atoms grip positive electricity better than negative electricity; a positive current gets propelled in iron from hot to cold. Copper, on the other hand, acts similarly on negative electricity.

In the foregoing I have laid the works of Prof. Lodge and Mr. Rust under heavy contribution.

SOME POINTS IN THE TECHNIQUE OF ELECTROLYTIC EPILATION.¹

By PLYM S. HAYES, M.D.,
CHICAGO, ILL.

THE removal of superfluous hairs by means of electrolysis was primarily devised as a purely therapeutic measure. It was only after this method had been demonstrated to be a perfect success in the destruction of hairs in entropium that this procedure was diverted from its strictly therapeutic channel, and applied to a broader field and used in what may be called a cosmetic rather than a therapeutic sense. Even if confined to the cosmetic use there is a decided therapeutic effect produced in the liberation of many ladies from a self-imposed seclusion if not actual close confinement, akin to prison life. The gloom produced from this seclusion has frequently made life a burden, and been a factor of no small moment in the development of a melancholia.

A correspondent writes that he understands that this operation is largely a mechanical one, and he desires instruction enough to know how, and then he will be able to do as well as any one. This latter statement he does not make, but from the tenor of his letter is readily inferred. The operation is mechanical, much in the same sense that the repairing of a watch is mechanical; but it is not every watch-maker, to say nothing of the broad class of mechanics, to whom we would intrust our valuable watches.

Those who first demonstrated the possibility of the permanent removal of superfluous hair by means of electrolysis, did their work so thoroughly and understood the laws of electrolysis so well, that but little has been added to the technique of the operation during the past six years.

Whether the operation is for therapeutic or cosmetic purposes, two points are to be kept constantly in the mind, namely: to destroy the hair and then see to it that you do not leave indelible proof in scars that you have done your work thoroughly.

The statement is frequently made that this operation leaves no scars. The frequent occurrence of scars in positions that tell of the destruction of offending hairs, as well as the form of the scar left, gives the lie to the statement. If this were not sufficient, then the applications that we have for the removal or modification of scars, or the completion of the work that some one else has commenced, but by reason of clumsiness has made the patient seek some more skilful operator, will leave no doubt in the minds of all that scars may result.

¹ Read at the meeting of the American Electro-Therapeutic Association.

Without entering into the detail of the operation so well understood, I will take up the points that have aided me most in making the operation a perfect success, and leaving little to be desired, unless it be that the time consumed in its performance may be abridged.

THE NEEDLE.

The history of the changes and modifications in the needle has shown that we did not have all that was to be desired in this important part of our apparatus.

Theoretically the needle should be so constructed that it will reach the bottom of the hair follicle, and come in contact with the papilla without doing violence to the tissues, and finally, to be so arranged that the current will exert its electrolytic effects only at the point of contact with the papilla. Practically this is impossible of accomplishment; but in this direction much more has been accomplished than would at first sight seem possible.

I early discovered that a blunt-pointed needle was much better than a sharp one, and a thin one than a thick one.

After a long series of experiments I came to the conclusion that steel was the only material that would give us a needle of sufficient tenuity, and yet have the strength and rigidity to accomplish the desired result.

The best material for the needle is found in the jewelers' broach, an instrument for reaming out the jewels in watches. This is ground to (so as to be of) a diameter varying from a one two-hundredths to the three two-hundredths of an inch. From the point to a space of a one-sixteenth of an inch back it should be slightly thicker than the shaft, although this bulbous joint is of advantage it is not an absolute necessity. The point of the needle is the main thing, and it should represent as nearly as possible a hemisphere. A conical point should never be used because of the danger of piercing the walls of the hair follicle.

The temper of the jewelers' broach of necessity renders the steel exceeding brittle, and it has been found of advantage to draw the temper in order to prevent breakage of the needle. This is best accomplished by taking a glass tube of about one-fourth inch in diameter and closing one end, and introducing the needle into the closed tube. This is then held in the flame of an alcohol lamp or Bunsen burner until the tube begins to become slightly red, when it is put aside to cool with the needle in it. When cold the needle will be found to have had its temper drawn so that it can be bent at right-angles and straightened again without breaking. It is still quite rigid enough for our purpose. Should the attempt be made to heat needles as thin as those described in the naked flame they will take fire and burn, thus completely destroying their usefulness. I present for your consideration, to illustrate these facts, some needles prepared as I have directed and furnished by the McIntosh Battery and Optical Company, of Chicago.

It has been with great difficulty that I have been enabled to have the needles manufactured of the diameter given in this paper. While the shape was easily obtained and the finish of the needle all that could be desired, the size was almost, without exception, from three to five times too great. Before using a needle I invariably examine it with a lens of three-fourths inch focus in order to see that the point is the proper shape. If the shape is not as it should be, another needle is selected. My experience has been that I could ill afford to work with a needle that was

not as it should be. I have found that a needle bent at an angle varying from 45 to 90 degrees from two to three-eighths of an inch from its point, serves my purpose better than a straight one. All things considered, we accomplish our best results with the thinnest needle.

(Those who have once used a needle prepared in the manner described, and as exemplified by the samples shown, will never use any other form of needle.)

THE CURRENT.

The strength of current required (for this operation) varies from three-fourths of a milliamperere to a millampere and one-half, and, in rare instances, possibly three milliamperes. The strength of the current, however, must of necessity be regulated by the amount of chemical action which takes place around the needle, as well as by the amount of pain produced. In this operation the chemical action produced around the needle (the negative electrode) is a much better index than the milliammeter. In fact, the milliammeter is all but a useless instrument in electrolytic epilation.

As a rule, the less current the longer the time required to destroy the tissue, including the hair papilla. From three to six cells of the diamond carbon battery is usually sufficient.

The question has been frequently asked whether storage cells could be used. The reply is, that if three or four storage cells are connected in series for tension, the current obtained from such a battery can be used. The resistance of the tissues, of the thin steel needle, of the ordinary electrode and of the cords is so great that our milliammeter will register no greater strength of current than as though we had used the same number of Bunsen cells.

The commercial current from an Edison plant has been successfully used. The pain produced is ordinarily so great as to make its use undesirable. The Edison current has an ordinary pressure of about one hundred and ten volts. To reduce this current so that we can use it for epilation, we find that the difficulty to be overcome is that, with our present means of controlling the current, we reduce the amperage much faster than we do the voltage, and, consequently, get a current of tension which is more painful than current obtained from a battery. The results of a number of observations have led me to formulate the following:

Have as little resistance in the circuit outside of the battery as possible.

A battery with large cells and large elements is preferable to one with small elements. Two cells of a storage or galvano-cautery battery are equal to about three cells of a diamond carbon battery. Where the external resistance is as great as it is in this operation it will be found that the milliammeter will register about one milliamperere for three diamond-carbon or two storage or galvano-cautery cells. It is thus readily seen that the current from the storage or cautery battery has been so reduced by the resistance of the body and the circuit, in which it is included, as to be unable to heat the needle at all. We must count the volts rather than the amperes. In the above statements, relative to the requisite number of cells of the various batteries required, it will be found that the volts in two cautery cells will equal the number in three diamond-carbon cells.

THE OPERATION.

I desire to emphasize but one or two facts rather than to give any detailed account of the operation.

Always use care in introducing the needle, and see that it follows the hair closely.

Do not carry the current so long as to produce a lesion that will form a scar on healing.

If the needle is arrested before it has entered much beyond the neck of the follicle, by reason of the size and density of the hair and root sheaths, allow the current to pass until any adhesions that may exist at the point are overcome. It would be well in this case to cause the needle to act on the tissues on all sides of the hair. Remove the hair, and the root sheaths will come with it, if the operation has been carefully done. The re-introduction of the needle in the now empty follicle is easily accomplished, and, if care is used, the papilla will be reached without trouble, and destroyed with more certainty and less destruction of tissue than as though this method had not been followed. This method is only to be used in those cases where the needle does not follow the hair to the papilla when first introduced. The re-introduction of the needle insures the destruction of a much greater percentage of hairs than where this is not done.

IN CONCLUSION.

We can state that but little that is new has been added to our methods in electrolytic epilation during the past few years. The advance in this branch has been brought about by improving the apparatus at hand rather than by the introduction of new apparatus.

In the *needle*, we note the exceeding thinness of it; the hemispherical and bulbous shape of the point, and the drawing of the temper. In the *battery*, that cells with comparative large amperage (large surface of plates) are of advantage. In the *circuit*, outside of the battery, that the conductors shall offer but little resistance; the connections be good; the positive electrode large; and that every piece of apparatus, such as a rheostat and milliammeter, that would interpose resistance, be left out of the circuit. In the *operation*, that it is advisable in many instances to remove the hair before the needle has reached, and the current has destroyed, the papilla, and then re-introduce the needle, which now readily glides into the follicle made vacant by the hair and its root sheath.

With the most approved apparatus the ultimate success depends as much upon the man as the means. Every operator leaves his record on the face of his subjects, and success or failure, as well as gratitude or regret (according to the result) is accorded to him who essays this simple yet delicate operation.

75 MADISON STREET, CHICAGO.

TWO NEW ELECTRODES.¹

By J. H. KELLOGG, M.D.

I WISH to bring before the Society, two new forms of electrodes for therapeutic use, which I have found of practical value, and have used quite extensively within the last year.

The first of these is a flexible, slightly adhesive electrode which is used dry. The electrode is composed of gelatine, finely powdered graphite, glycerine, and chloride of sodium. It is made as follows: Dissolve 20 ounces of the best gelatine in 10 ounces of boiling water; add 10 ounces of glycerine and 2 drachms of sodium chloride; heat, and add 10 ounces of finely-pulverized gas carbon, mixing thoroughly.

¹ Read at the meeting of the American Electro-Therapeutic Association.

To form the above mixture into an electrode, take a shallow tin pan of the size desired for the electrode. Oil the inside of the pan with vaseline. Pour in a sufficient amount of the hot mixture to cover the bottom of the pan; lay in the pan a piece of sheet lint, cut of sufficient size to allow the edges to turn up about one-half inch around the sides of the pan; pour in some more of the mixture, sufficient to saturate and cover the lint; lay in another piece of lint, a little smaller than the first, and cover this also with the mixture in the same way. A third and fourth sheets of lint may be added, if necessary. Usually, two pieces are sufficient to give the desired strength. A piece of brass-wire cloth, to one corner of which a binding post has been attached, is next laid in; add more of the mixture, if necessary, and then another piece of lint. The wire cloth and the last layer of lint may be a trifle smaller than the electrode is desired to be. Lastly, fold the upturned edges of the first layer of lint over the back of the electrode, and apply a sufficient amount of the mixture to bind them in place. When the electrode is cold, and sufficiently hardened, carefully remove from the mould. If the surface of the electrode is not perfectly smooth, it may be polished with a hot spatula. Whenever the surface of the electrode becomes roughened by use, it may be smoothed in the same way. If the electrode becomes cracked, or its surface very irregular, it may easily be repaired by applying a little of the hot gelatine mixture, and smoothing with a spatula.

This electrode is light, clean, adhesive, a good conductor of electricity, and durable. I have often had an electrode of this sort in daily use in my office for weeks without being able to detect any material deterioration in it. I find that a greater quantity of electricity can be communicated to the patient through an electrode of this composition than through a clay electrode of the same size. I attribute this to the more perfect contact between the skin and the gelatine-graphite electrode than is obtainable with a clay electrode.

I first began experiments with reference to the construction of this electrode in July, 1890; I began the use of the electrode in August of the same year, and have employed a number of them in my office since that time. From twenty to fifty applications of the galvanic current are made in my office daily, in a large proportion of which currents varying from forty to two hundred and fifty milliamperes are employed. I have constantly under treatment a considerable number of cases of uterine myoma, but I have not, since I began the use of this electrode, found it necessary to resort to the clay, or any other form of electrode in a single instance. A flexible and adhesive electrode may be made by combining red lead with the gelatine, and other substances capable of acting as good conductors.

I have recently had constructed, and have used with much satisfaction, another form of electrode, which, so far as my knowledge extends, is novel. It consists of a metallic vacuum cup, to which a binding post is attached, a moist sponge being placed inside. In use, the air is passed from the cup, causing it to adhere firmly in position, and at the same time bringing the tissues in close contact with the sponge. In the use of this electrode three advantages are gained:

1. The vacuum created in the cup establishes a condition favorable to electrical conduction. The resistance of the skin is considerably lessened by the increased vascularity induced by the vacuum created within the cup.

2. Very excellent contact is produced by the strong pressure of the moist sponge against the tissues, resulting from the exhaustion of air from the cup.

3. An intensified impression is produced upon the tissues by the combined influence of the electrical current and the cupping.

I have found this electrode very efficient in the treatment of obstinate, deep-seated pains which had resisted the long continued use of both cupping and the galvanic current employed separately. I am still studying the properties of these electrodes, and shall be able to make, at a future time, a more precise report of their value and properties.

THE GALVANO CAUTERY—ITS USE IN REMOVAL OF PILES AND GROWTHS.¹

By EPHRAIM CUTTER, M.D., L.L.D.,

President American Branch Society of Science, Letters and Art, of London; Corresponding Member Belgian and Italian Microscopical Societies; Physician-in-chief Heartrest Sanatorium, New York.

GALVANO CAUTERY is employed to remove growths without bleeding, and generally with complete and perfect cure. That is, malignant growths are not apt to recur on site of removal; they may recur elsewhere.

The tissues heal healthily, so that it is difficult at times to tell whence the growth has been removed.

PRINCIPLES.

1. Have a good battery, with freshly prepared solution or well charged. If a storage battery, test it well as to connections beforehand, and be sure it is in order before you begin.

2. It is not a good plan to do more operations than what you intend.

3. I have seen storage batteries give out during an operation. Most of my work has been done with my own primary batteries. So long as the failure of the galvano-cautery comes from the batteries I have thought it best to invent my own, so that I could be sure that the batteries were all right.

4. I have used a large battery, with about thirteen and one-half square feet of surface, with advantage. But I like best a battery which has about one-eighth of the sensitive surfaces of the former, and is operated with one pint of solution. The weight of this apparatus is less than any storage battery I have seen. Its cost is less. It can be excited more readily, and, though it is not conventional to use such a battery, so long as it has done good work I see no reason why I should not use it.

5. I use heavy conductors of pure silver. These are less bulky and more flexible than copper. I got the idea from the late Dr. Louis Elsberg.

6. Carbon and zinc plates variously connected, so as to be portable and not break; to have broad connection with as few breaks as possible.

7. It is easy enough to generate a current, but the great thing is to insulate it, and give it a good track to run in.

8. In the ordinary coupling, with screw socket, there is not a typical connection. It is very much like shaking hands with one finger of your fellow in your palm. This kind of shake makes me feel mean. But if you want to have a good, hearty, strength-conferring, whole-souled handshake, palm must join palm. Here is a surface connection broad and large. Such handshakes are pleasurable, and have a full-

¹ Read before the American Electro-Therapeutic Society, at Philadelphia.

ness, are cheery and devoid of meanness, and force is thus conferred. It is so with the connection of batteries; they should have broad surfaces coming in close contact, flatwise; in the ordinary screw coupling the contact is linear and tangential; what the writer uses is broad flat surface to equally broad flat surface.

9. *Cam Coupling*.—These I like, for they do not easily come apart. Screw couplings get loose almost invariably. The cam couplers, properly made, will hold even if dashed against a brick wall; they are easier fastened, opened, and controlled.

10. *Cautery Holder*.—Mine is very simple.

First.—A tinsmith rolled up a piece of tin into a tapering tube six to eight inches long, one-fourth inch in diameter at one end, and one-sixteenth inch at the other. Two such tubes were mounted on a glass window plate four inches long, one and a half at one end, and one-half inch at other end, by flanges of tin, riveted through the glass, or held in place by India rubber bands. The primitive tinman's appliance I have would convey more current than the brass and nickel plated one made by the surgical instrument makers.

To Use It.—Simply run the ends of the conductors into the large ends, crowding them in so as to hold. Before this application, a fine platina wire, twelve or sixteen inches long, is run through the large end of one tube out of the small end, then through the small end of the other tube and out of the large end. This wire can be fixed by simply bending the free ends outward sharply over the tube.

11. Some principles about the wire:

(a) It must be small. All it is good for is to burn the adjacent tissues.

(b) It is not an *ecraseur*. Platinum is not strong enough to cut tissues as iron wire does, besides it is unnecessary for it to cut.

(c) Simply draw it in contact with the tissue, then pass the current by a switch or, better, by dipping the plates of the battery in the solution by means of an assistant.

(d) Stop the current when things are getting too hot. There is no need of the adjacent parts being burnt. Besides, slow and broken applications, allow of the sealing of the blood-vessels, so as to avoid hemorrhage. Rarely do I have a hemorrhage.

(e) After things have cooled, draw gently on one end of the platinum wire, and take up the slack, and fix by a sharp turn over end of tube. You are then ready for another application of the current. This letting the wire cut its way by burning is much different from cutting as an *ecraseur*. In the method here used there is no disturbance of the adjoining parts. With the *ecraseur* all the surrounding tissues are drawn in, more or less, so that more tissue is taken in than needed. In the method here used there is no indrawing of tissue, and no taking more than is required. Important repetition.

(f) Another thing, the wire must be hot. A white incandescence is the best. Dr. Elsberg used to say that the reason why there was trouble with galvanocautery was the wire was not hot enough. In my battery I have not been troubled by the method, which allows of unsealed blood-vessels and slow healing of parts. When the wire is at proper heat the cautery is a germicide, and seems to agree with the body tissues. This point will be brought out later.

12. The connections of the battery are so arranged that they cannot come in contact with the fluid. This is done by the battery being shorter than the plates.

It is a good plan, after use, to wash cell and battery thoroughly in water, and then to dry, before restoring plates to cell.

13. Sometimes the battery will not work, though there seems to be no good reason for it, save polarization. In this case let the battery sleep over night; probably the next day it will run all right. The battery should be kept away from the dust. It takes but a little observation to see what a vehicle the atmosphere is of all sorts of morphological things; some seem to act on the battery connections as lichens on rocks. It is wonderful how little will interfere with the conductors of a battery. In the writer's latest attachment the conductors and connecting-bars of the zinc and copper are fixed so as to draw out to be polished with a sand-paper, and returned in a few minutes.

14. The fluid best for battery is saturated solution of bichromate of soda with sulphuric acid, 1 oz. to 11 ozs. of solution. *It should be cold*. The battery works best while cold.

The potash salt is used the most, as it is the cheapest, but it does not dissolve so well as the soda salt. If there was a demand for the soda salt, it would be much cheaper than the present price of chromate of potash, as sodium abounds more in nature than potassium.

Anæsthesia.—This is not always needed, as if the wire is properly heated it destroys the nerves, as it burns, with little pain.

CASES.

CASE I.—Mrs. —; 1878. Cauliflower tumor of vagina. This was a growth with sessile base and an umbrella expansion, much like a mushroom. The site was one and a half inches within the vagina. Case had been said to be hopeless. Age, seventy-four years. The growth was removed by the galvano-cautery, so that the site was smooth and flexible as the cheek under the zygoma. There was no recurrence at site, but disease involved the uterus, of which patient died four years later; so that life was prolonged to this extent. Anæsthetic used; no hemorrhage.

CASE II.—Mr. —; 1876. Dense piles surrounded the whole anus, which were painful and sore. Anæsthesia. Three-fourths of the periphery were burnt off with the wire. No hemorrhage. One pile, that made up the remaining fourth, was removed with the *ecraseur*, to see if the mode of ablation made any difference; it did make a great difference. Whereas those sites where piles were removed by the galvanocautery immediately healed and were absolutely painless, the site of that removed by the *ecraseur* was painful and a long time in healing. The subject said he wished the whole had been burnt off. The piles have never returned.

CASE III.—Mrs. —, aged sixty-five; cauliflower growth right popliteal space. Another just above the right breast. Both these were removed by the small battery, referred to above, two years ago. They have shown no signs of re appearance, and their sites are hardly discernible. No anæsthesia.

CASE IV.—Mr. —, husband of foregoing case, seeing her growth removed so easily, at his wife's request, showed me a tumor over the spinous process of the third cervical vertebra. It protruded like the last joint of a man's thumb; was dense and hard; not painful. I thought the battery would hold out, though I told him that it might not. It held out till the growth was nearly cut off. Then the battery had to be excited with dilute sulphuric acid. This heated it so that it did not work very well, and I was not so

well pleased as in his wife's case. Still the case did well. The site is almost invisible, flexible, and there is no disfigurement by a scar. No hemorrhage. No anæsthesia; had I been prepared for this case it would have been more expeditiously performed.

CASE V.—Mrs. —, aged seventy-eight years; 1879. A hard, angry-looking tumor of the size of a split pea on the right upper eyelid. It was mobile and somewhat painful. This was removed by the small battery. No anæsthesia. It healed up so well that there was no scar or mark to indicate its presence in two weeks. Considering the age of case and the location, it seems as if this was good surgery. Her son, a boss joiner, said afterwards that he considered it a pretty nice piece of carpenter work. I was assisted by my son Dr. John A. Cutter, then in college. No assistance in cases III and IV, which were operated upon in a country village in Connecticut.

CASE VI.—Capt. —, aged sixty years; 1891. A small growth on chin, ugly looking and increasing in size. Operated upon in office, assisted by my son. Small battery used. Cocaine anæsthesia. Three weeks later, case called in my absence, and my son reports that he could find no scar or trace of operation.

CASE VII.—Miss —, aged forty-two years; 1891. Operated upon at Heartrest Sanatory, assisted by my son. Voluminous and sensitive piles. Patient came under ether badly. Had to give chloroform before anæsthesia was effected, and then patient tumbled and kicked so as to interfere with operation seriously. This was not done to entire satisfaction, still the final result was good and the parts resumed normality.

CASE VIII.—Mrs. —, aged 45 years; 1882. Cancer of left groin. Was assisted by Dr. William G. Wheeler, of Chelsea, nature's nobleman. Tumor large as a hen's egg. Anæsthesia; operation difficult because of its sessile nature and cancerous lymphatic glands of the groin. Still I succeeded in removing it, and the upper margin of cavity contracted so much as to cover the burned area well. It healed well. But the disease recurred in right Poupert's ligament and womb, and destroyed life.

With these few cases I close this paper, trusting that the Fellows of the Society will another year report more cases. It seems to me that this operation is almost an ideal one for piles and small growths.

THE ARISTON, BROADWAY AND 55TH STREET, NEW YORK.

INTERESTING CASES OF ABDOMINAL TUMORS.¹

By M. PRICE, M.D.

MRS. R. [Dr. Keller's patient], suffering from sarcoma of the left ovary. She has complained only for the last nine months, has rapidly lost flesh, and continuously enlarged from encysted peritoneal dropsy.

She gave a history of a tumor, and spoke of it as dropping from the right side to the left. The appearance of her face was that of one suffering from ovarian disease. There was in her diseased condition indications of more serious complications.

June 14 we operated for the removal of the diseased condition, and found encysted dropsy and sarcoma of the left ovary as large as a child's head, and as the hemorrhage was so great from a slight examination, it was thought best to remove it, and it was done in

as perfect manner as possible. The ligature of the pedicle controlled the hemorrhage perfectly; thorough washing of the peritoneal cavity; a drainage-tube at the lowest point from which the tumor was taken; careful closure with simple dry dressings completed the operation. The tube was left in four days; the patient made a rapid recovery from the operation.

I expect this poor woman to have her disease return, and that very soon, and could I have been perfectly sure of what the trouble was, I would not have operated. But when we do undertake anything for their relief, let us at least leave them in as good condition as we found them, and not with dangerous hemorrhage to destroy them in an hour or so, and all because we have not the courage to complete an operation we had the assurance to begin.

Present: Drs. Jos. Price, Morris, Murry, and Keller.

This patient was examined on the 25th day of October; she is perfectly well and doing her work, with no indication of a return.

Mrs. J. T. [patient of Dr. Hutzell]; this young woman, twenty-one years old, has been suffering for eight years from a complication of diseases which culminated in an operation for her relief. When she was fifteen years old she had a discharge from the navel of pus and hard calcareous matter; this discharge lasted some two years; she has not enjoyed a single day of perfect health for the last seven years, but has for the most part done her housework and assisted her husband in his laborious business for the last year, with a condition of things in her pelvis that is hard to imagine any one walking about with, much less work. She only submitted to an operation because Dr. Hutzell told her nothing else would help her to get well. Examination of the pelvis indicated pus and a general adherent condition of all the pelvic contents, so that I did not expect an easy removal of the diseased condition, but I was not prepared for such an uphill undertaking as I found was necessary for the relief of this most distressing case.

After the usual opening of an inch and a half, I found the pelvis blocked with a peritoneal cyst with dark and bloody contents; this was emptied and the contents of the pelvis at once investigated. Both tubes were diseased; the left with more than a pint of offensive pus, the right two or three ounces of pus, both adherent to all the surrounding viscera. The enucleation was most difficult from start to finish. In addition to the pelvic disease and the peritoneal cyst, there was a collection of large hard concretions, some of them as large as a walnut, completely covered by folds of the bowels and the peritoneum.

In the removal of these concretions there was an additional risk to the patient, they had to be removed from their bed. The bowel folded around them so that it was difficult to tell where to begin without opening the bowel. The effort for their removal consumed considerable time, but all were removed that could be found. Perfect irrigation of the entire abdominal cavity after most of the adherent bowels were torn apart. I say most of them, for it was impossible to complete the separation; they were so well formed that I considered it unsafe to do so much tearing in this complicated condition of affairs. Thorough washing, with the drainage-tube in the most depressed portion of the pelvic cavity, a complete toilet, and the patient put to bed. Time of operation, forty-five minutes.

She was by all odds the best patient I have had the pleasure of treating. She made a perfect recovery after one week of drainage, with not a single complaint from beginning to end.

¹ Read at the Philadelphia County Medical Society, October 28, 1891. For Discussion, see page 410.

Dr. Jos. Price's hospital, 241 North Eighteenth street, June 10, 1891.

Examined on the 26th of October; perfectly well; no pain; able to do all of her work with perfect comfort.

Supra-vaginal Hysterectomy.—Miss W. R., aged forty years, suffering from a rapidly growing hard tumor on the right side, filling the pelvis. The cervix high to the right and above the brim of the pelvis and a hard body the size and shape of the uterus. The tumor movable, all but the pelvic portion, which was apparently fixed. The patient was only aware of a lump in the side during the last two or three weeks prior to operation; she was sure it was not there a month. When I examined her the day before the operation, the tumor was as large as a womb at the seventh or eighth month of pregnancy, and nodular. She was incapacitated for work, and it was decided to remove it as its rapid growth indicated malignancy.

July 9, with the assistance of Drs. Jos. Price and Morris, I removed the entire uterus and appendages, and left nothing but the cervix clamped by the Delta metal wire nœud, with dry iodoform dressings to finish the operation.

The tumor was a most interesting one, and in a great measure explains the history the woman gives of its rapid growth. In the pelvis there were three fibroids with all the pathological characteristics of tumors of that nature; the cervix to the right and high up, and the uterine canal not over three inches long, enclosed by the large tumor to the right of the uterus, and front and back of it one of the little fibroids.

The large tumor was entirely different in all of its pathological appearances, and when opened had a distinct capsule, and when the capsule was opened widely gaped as if there were great pressure from within pushing out the muscular tumor, or I have no doubt a malignant and rapidly growing tumor inside the capsule.

Examined by Dr. Bigelow: spindle-cell sarcoma.

Examined October 28: at work, free from pain and in good health.

Miss M. D., aged thirty-two years, suffering from left ovarian tumor with myxo-sarcomatous contents. This young woman was accused of being pregnant by several well-known doctors who had treated her for several months. Patient submitted to an operation to remove the suspicion of her unchastity. Operation was an easy one, and she made an uninterrupted recovery. Weight of tumor, twelve pounds, with contents.

Obstruction of the Bowels by Gall stones.—Mrs. M., aged forty-five years, was taken on September 13 with slight pain in the right side of the abdomen; on examination it was thought the area of dullness over the liver was considerably enlarged; had no increase of temperature or pulse. An effort was made to move the bowels, which was persisted in until the 17. During this time ten calomel powders were given, four Seidlitz powders, two bottles of citrate of magnesia in divided doses, two ounces of Epsom salts, one drop of croton oil. There was no vomiting and no increase of pulse or temperature. The patient's condition was up to this time good; but a very anxious expression of the face was beginning to appear, and she wished something done for her relief.

Pulse beginning to show signs of weakening; no tympanites. At this time we thought something radical must be done to relieve the obstruction of the bowel. Gall-stone was not suspected. Ether was given. An opening directly over the region of dullness, two inches in length, was made, when a greatly distended gall-bladder was at once discovered; tapped,

and the contents drawn off, which was a clear, gelatinous fluid; had none of the characteristic appearances of bile. The gall-bladder was examined, and two large and one small stones removed.

The direct cause of the obstruction of the bowel was the pressure made by the distended gall-bladder, with the gall-stones laying on the transverse colon. This pressure was made possible by the distention of the gall-bladder as it enlarged and was pressed backward by the abdominal wall, making pressure on the colon, and causing the obstruction, which was as complete as any I have ever seen.

Drainage-tube placed in gall-bladder, which was securely stitched in upper angle of wound; two sponges had been placed in the peritoneal cavity to protect it from the discharges; these were removed, and thorough irrigation of the abdomen was made. Silkworm-gut sutures; closure of the wound; dry dressings and bandage. The effort to move the bowels was continued until the third day after the operation, when a slight movement was obtained; flatus passed freely. On the fourth day there were free purgations after large and repeated doses of Epsom salts, both by the mouth and by injection. Injections were also used freely before the operation, as well as all the other treatments. Calomel powders every twenty minutes; one dozen or more given. Patient made a most beautiful recovery and is now able to attend to her home as before.

Mr. G. C., aged forty-six years [Dr. Prendergast's patient], had been suffering for a long time, when making unusual exertion, with pain in the region of the head of the colon.

Four days before operation, while at Atlantic City, was taken with very severe pain in the abdomen; on his arrival at home his physician gave him small doses of mild chloride and soda, followed by Rochelle salts. He was freely purged, and all the urgent symptoms relieved; but he still complained of pain at the head of the colon. After a careful examination, Dr. Prendergast decided that his patient was suffering from appendicitis or abscess at head of colon. Patient had quick pulse, subnormal temperature, distended abdomen, anxious countenance, and was a very sick man. At this time I was called in consultation, it being the evening of the fourth day of his disease. An operation was advised and consented to by the patient.

On August 29, at 8 A. M., ether was given. An opening, one and a half inches inside of the crest of the ilium, directly over the area of dullness down to the abscess cavity, was made, and from four to six ounces of pus and feces were discharged. The appendix was folded back, and to the outside of the colon, almost entirely separated from it by ulceration. The parts seemed to be so soft and gangrenous in appearance, that I thought it best to leave everything in position, use irrigation, two rubber drainage tubes, and pack with gauze; but when I washed out the cavity I found that the slight barrier that had separated the abscess from the peritoneum had been broken, the intestines protruding through the wound. I at once decided to wash out the peritoneal cavity and use glass drainage into the pelvis, and dress the external wound as above stated. Three stitches were applied, but two were cut away that evening. Patient was freely purged the night before the operation, and began purging on second day, and continued naturally, four or five movements per day, until the fourth day; after that salines were given to keep the bowels free.

Patient made a beautiful recovery. For this result I am greatly indebted to his physician for his untiring care and attention and good treatment before, during, and after operation.

Mrs. J. W. H. [patient of Dr. C. H. Dunham, of Trenton, N. J.], suffering from extra-uterine pregnancy. Operation October 14, 1891. Recovery.

August 1 was taken with very severe pain on left side, accompanied with diarrhoea; she was four days over her expected period; while at stool felt severe pain in lower left side of abdomen, and immediately became sick at the stomach and faint. Her period made its appearance at this time and continued for three weeks. This is her statement of her condition. She was attended for nine weeks by a practitioner unknown to me, and had frequent recurrences of her first attack. When Dr. Dunham was called to her assistance, she was having daily chills with other symptoms of peritonitis; also a tumor filling the abdomen as high as the umbilicus. At this time Dr. Dunham telegraphed me he had a case of extra-uterine pregnancy, and asked me to come prepared to operate. I went to his assistance October 14, and found the patient in bed, perfectly comfortable, without any indication of trouble, owing to free purgation which the doctor had given her preparatory to operation. The increase of pulse and the tumor remained as proof of the correctness of the diagnosis.

A small incision was made in a thickened and much changed peritoneum, immediately on the opening of which great quantities of very offensive blood was discharged from the abdomen. Instant search for the impregnated tube was made, brought up, and ligated. Thorough irrigation and drainage; the latter was continued for four days. Great, broad flakes of inflammatory lymph were removed from this cavity. At the time of operation there was a distinct inflammatory diaphragm extending from crest of ilium to crest of ilium, leaving a large cavity lined with this product, which would not permit the internal viscera to return to their place; this cavity was filled with boiled water. Not a single bad symptom; an uninterrupted recovery.

Married two years; no children.

Mrs. A. G. B. [patient of Dr. C. H. Dunham, of Trenton, N. J.; his second case of extra-uterine pregnancy in five days], suffering from extra-uterine pregnancy. Operation October 19, 1891. Death.

Patient is thirty-six years old; has three children; eight years between first and twins twenty months old. She passed one period August 8, and September 6 had a slight discharge, pale in color. One week later had severe hemorrhage, with pain and symptoms of miscarriage; persistent diarrhoea with sick stomach; felt weak and faint. A rupture at this time had unquestionably taken place; hemorrhage continued with recurring attacks of pain. The doctor had made his diagnosis early in the case; but free purgation had so relieved her that he was persuaded to delay; but her condition continuing to grow worse—pulse 130; temperature normal; patient very pale; a decided boggy feeling in the pelvis, and hardened masses in the abdomen—decided him to have an operation, and he asked me to see her, and operate at once. Through a small incision I opened the peritoneum. The abdomen was full of fluid and clotted blood to the diaphragm; no odor; no indication of peritonitis. I immediately removed the impregnated tube, which was on the right side. The foetus was also found by Dr. Dean, of Spartanburg, S. C., who was assisting us. The blood-clot was adherent to every portion of the peritoneum, and to the anterior and posterior face

of the omentum. It could not be removed by flushing or scraping. A large conical clot, as large as my two fists, extended down by the rectum. All the clots and free blood that could be washed out, using three large pitchers of water, were gotten rid of. After free irrigation the peritoneum had anything but a comfortable appearance, as it was perfectly black from adherent blood clot. There was no odor to the blood, no apparent chemical change having taken place. As to the purging in these cases, I have no doubt it is from the pressure of the clot on the rectum. The absorption of most of the fluids and saline constituents of the blood may have some effect to increase the diarrhoea. The tenesmus and straining at stool unquestionably increases the loss of blood, greatly increasing the danger of the patient.

A seven-inch drainage-tube was left at the lowest point of the enucleation, and the top of the tube just reached the abdominal wall. Boiled Trenton water was used for irrigation, and about one quart was left in the peritoneal cavity. Twenty-four hours after operation the pulse was 120, and temperature $101\frac{1}{2}^{\circ}$. Heart-clot feared, otherwise patient doing well.

Death from heart failure three days after operation; patient was too comfortable to do well from the beginning.

RETENTION OF URINE CAUSED BY MULTIPLE URETHRAL CALCULI.¹

By J. V. PREWITT, M.D.,
WEST POINT, KY.

I AM somewhat at a loss to know just how to present this subject of Urethral Calculi before you in the most profitable manner, unless it be to report a case which fully illustrates a pathological condition seldom met with, even by specialists, namely, urethral calculi formed in the urethra.

Urethral calculi are always formed of some of the constituents of the urine, which become precipitated under certain varying conditions, with the exceptions of the nucleus, which may be in addition to a urinary constituent. A foreign body which has been introduced into some part of the urinary tract from without, or a piece of normal or pathological tissue, or a mucus or blood coagulum. Among the foreign substances which have formed the nucleus of urinary calculi are pieces of bougies which have been broken off in the bladder or urethra, bullets which have found their way into the urinary tract; also, pencils, beans, and peas, which are often introduced into the urethra by children. Any change in the system which causes an increased formation of any of the slightly soluble constituents of the urine favors the tendency to the formation of calculi within the urinary passages, since they do not find sufficient amount of urine to hold them in solution. The substances which are liable to be formed in excess and to become constituents of urinary calculi are uric acid and acid urates, calcic oxalate, cystin, and, very rarely, xanthin. The constituents of urinary calculi most frequently met with are urate, oxalate, phosphatic, and cystin concretions. Urinary calculi may be formed in any portion of the urinary tract from the renal tubules to the meatus urinarius. The commonest place, or places, is the pelvis of the kidney and bladder.

CASE I.—Winfield S. G., aged thirty years; occupation, farmer. Fifteen years ago he was kicked on

¹ Read before the Mississippi Valley Medical Association, St. Louis, October 18, 1891.

the penis by a horse. Some blood was passed for a few days. A few months later he observed that the stream was very much diminished in size, and had a desire to micturate much oftener than usual. Four years after the kick he began getting up at night three to four times to void his urine, and continued to grow gradually worse. For the past ten years he has been troubled more or less with retention of urine, and, at times, voided it by drops. He suffered no pain, had never passed any gravel, and no history of renal colic; but has complained for the past eight years of a hard swelling, which gradually increased in size, in the perineum, extending from the anterior aspect of the sphincter ani well forward through the scrotal region. There was some twisting of the stream and sudden stoppage, and a few drops of mucus would pass just before the urine. These were all the symptoms manifested.

October 9, 1890, he went to bed, suffering with retention of urine, voiding it a few days previous by drops.

October 29 (twenty days later), I was sent for by the attending physician. He had been treated by all of the physicians in his section of the State for chronic cystitis, nephritis, etc. Each year he raised a large crop of tobacco and corn. During the year he would be laid up three or four times, suffering with retention of urine, which would get better in a few days, and he would return to work. Upon an examination I found a close stricture, one inch and a fourth back from the meatus urinarius, and the urethra recently ruptured at the bulbo-membranous junction, and the large amount of the long-retained urine greatly infiltrated the surrounding tissues. The scrotum presented a cylindrical appearance, being near the size of a gallon vessel, and the perineum bulging out very much. He had just gotten over the second uremic convulsion as I got there. I repeatedly failed to pass the stricture with sounds, and even with a filiform bougie. I then passed a probe to the seat of stricture, using but little force. I found a hard substance just back of the stricture, but no click, owing to the dense cicatricial tissue. I then made a probable diagnosis—calculus—but was not positive. The patient was placed in the lithotomy position. Dr. R. Tidings administered the chloroform. The staff was introduced with the groove looking toward the surface and brought carefully into contact with the stricture, and a median incision made down to the guide, just anterior to the stricture. I then extended my incision in the median line toward the perineum, parting the stricture and exposing the first calculus, which was imbedded to some extent in pus. The escape of the urine came with a gush as I parted the stricture. The excision was extended, owing to the fact that I was unable to extract the first two calculi with the forceps. One finger was introduced into the rectum, and by manipulation I succeeded in evacuating the urethra of eighteen faceted calculi, occupying almost the entire extent of the canal, weighing 403 grains. The three first calculi are round, and just filled the urethra, which has been probably dilating its walls for the past three or four years. From the specimens you see they all have facets, and are joined together very completely.

As to treatment, there is no question as to what should be done, but how it can be best attained. The operative procedure must depend largely upon the peculiar feature of each individual case. If the stone is small and the urethra of comparatively normal caliber, it can be removed by the use of Gross'

long urethral forceps, or the ordinary long uterine dressing forceps. In case the stricture is very close, it should first be gotten rid of by some of the recognized operations. If the calculus is in the deep urethra, it may be deemed advisable to dislodge it, forcing it back into the bladder, where it can be dealt with according to the fancy of the operator. Various instruments have been devised for the removal of foreign bodies from the urethra; but such an occasion to use such instruments comes but a few times in the life of the general practitioner. He rarely has at his command such an appliance, and such instruments are of service only when the stone is small and the urethra normal. Obviously, such methods as above suggested are not applicable to the case under consideration. From the size of the stone, the number, and the condition of the urethra and peri-urethral tissues.

When the diagnosis has been made of calculi in the urethra, I would most assuredly, in a majority of cases, introduce the staff into the urethra, making an incision down to the stone, and remove it.

The case mentioned above made a good recovery, and the patient raised a large crop of tobacco and corn this year.

THE SIMPLE EXTRACTION OF CATARACT.¹

By EDWARD JACKSON, M.D.,

Professor of Diseases of the Eye in the Philadelphia Polyclinic and Surgery to Wills Eye Hospital.

THE old flap operation for the extraction of cataract, when it was successful, was one of the brilliant triumphs of operative surgery. The trouble with it in the old time, before the day of Graefe, was, that it was successful in only a minority of cases. The real achievement of the last few years with reference to it, has been the increasing of the percentage and the perfection of its successes, until they have surpassed anything achieved by other operations for cataract extraction. This has been brought about by collateral advances in medicine and surgery, that have given us an understanding of sepsis and asepsis, of the myotic power of eserine and its allies, and of the anæsthetic and other powers of cocaine.

My purpose in this paper is to discuss the operation of "simple extraction" as I practice it, with the reasons for choosing certain procedures rather than others, and some comparison of the results of the method with the modified linear extraction, or modified Graefe method, which it has largely replaced.

The Corneal Section is made upward, namely because it seems to me that the wound in this position is much better protected beneath the closed lids from either infection or the relative displacement of its lips than the downward section can be. It is made in the clear cornea, sometimes as close as it can be to the limbus without encroaching on it. It is parallel to the corneal margin, the plane of the knife making it being parallel to the plane of the periphery of the iris. It is made to include nearly, and sometimes quite, half of the circumference of the circle of which it is a part. The exact position of the section and its length are determined by the size of the cornea and the supposed size of the lens. The plane of the section should be well in front of the iris, for the risk of prolapse of the iris is thereby greatly lessened, yet the incision must be long enough to permit the escape of the lens. The section is made with the knife de-

¹ Read at the Philadelphia County Medical Society, October 28, 1891. For discussion see page 413.

scribed by me in the *American Journal of the Medical Sciences* for March, 1888, for the reasons there given, that it combines to a large extent the manageableness of the Graefe knife with the smooth incision of the Beers knife. Usually the incision is almost completed by the forward thrust, the cutting edge being carried by it out of the anterior chamber, and the remaining bridge of corneal tissue severed as the knife is withdrawn.

The *Capsulotomy* is made with the point of the knife used in making the corneal section, and is about in the plane of the corneal section, as the lens lies against the cornea after the escape of the aqueous. I have in a few cases opened the capsule before completing the corneal section, as the point of the knife was carried across from the puncture to the counter-puncture. This was done in the fear that after the escape of the aqueous, the pupil would contract so that it would be difficult or impossible to make a sufficient laceration of the capsule without wounding the iris with the knife-point. Such a manœuvre, however, required a slight change in the direction of movement, and prolonged a little one of the most critical periods of the operation. It was given up on finding that a sufficient opening in the capsule can always be made through the pupil after the completion of the corneal section. The opening that it is necessary to make in the capsule is really quite small, a slit four or five mm. long is quite sufficient, probably because, when the solution in the continuity of the capsule is once started it extends quite readily, as widely as it is needed, under the pressure of the lens during the stage of its delivery.

The advantages of this method of opening the capsule are that by it we get rid of one instrument, the cystotome—an instrument hard to keep clean at the shoulder from which the pricking point projects, hard to get and keep perfectly sharp, liable from its shape to catch and damage the cornea or iris in case of sudden movement while it is in the eye, and which I have seen more than once, by its direct backward pressure, dislocate the lens and allow the escape of vitreous. Then, the small opening in the capsule nearly in the direction of the corneal section, seems to have a decided influence in making sure of the proper rotation and presentation of the lens in the corneal wound; and cortical matter as well as nucleus has a perfectly direct avenue of escape; and if cortical matter remains after the nucleus has been extracted, it remains inside the capsule, and not in the anterior chamber where it would exert its well-known deleterious influence on the iris; or, as some have supposed, furnish an especially favorable culture medium for the pathogenic bacteria introduced on the shank of the cystotome, or along a path of capsule incarcerated in the corneal wound. Again, with this method of opening it, there is no chance that portions of the capsule will prolapse or become incarcerated in the wound, and so complicate the healing and endanger the ultimate result more insidiously, but quite as seriously, as prolapse or incarceration of the iris.

This method of opening the capsule has this disadvantage, that when the pupil contracts, as it does in the process of washing out the anterior chamber, the iris sometimes entirely covers up the rent in the capsule, and makes it much more difficult to dislodge any remaining cortical matter. Under these circumstances, it is best to make no effort to dislodge it, for, in my experience, cortical matter left within the capsule after the removal of the lens nucleus is innocuous, and is certain to be removed by absorption in a few weeks at the furthest, causing some delay in the

full restoration of vision, and detracting from the brilliancy of the operation, but in the end giving the patient the best result.

The *Delivery of the Lens* is effected by making pressure with a lens spoon backward on the lower portion of the cornea, and with a corneal spatula slightly downward upon the upper ciliary region, causing the lens to push into the pupil and engage in the corneal wound, the movement of the lens being steadily followed by a slight upward movement of the spoon, and the necessary pressure never relaxed until the greatest thickness of the lens had passed through the corneal section. It is of the utmost importance that the pressure be maintained steadily; any intermitting of it that causes the lens to alternately advance and retreat is liable to bring about the displacement of the lens, and the presentation of the vitreous in its stead. After the nucleus has escaped, the pressure is gently continued until any evident masses of cortex have also been extruded, and then withdrawn.

Washing Out of the Anterior Chamber I have practised after the method and with the apparatus of Dr. Lippincott, of Pittsburg, for the last year, as the principal step in the operative toilet. If the iris has prolapsed, the stream of boric acid solution is the simplest and best repositor, its effect being to carry the iris into position, and at the same time to provoke a marked and very satisfactory contraction of the pupil. If the opening in the capsule remains freely accessible, the current may be directed into it and all lenticular debris removed. But if this is not readily accomplished, I content myself with a thorough washing out of the anterior chamber, at the end of which the pupil is found small and central, stroking of the iris with the spatula, or poking into the angles of the corneal wound to dislodge incarcerated iris or capsule, being thus dispensed with.

Eserine is Instilled after the washing of the conjunctival sac, although usually the effect of the irrigation of the anterior chamber has been to already secure a small central pupil, in order that this contraction of the pupil may be maintained and the iris drawn as far as possible away from the cornea. In a single case in which I omitted the use of eserine, a slight prolapse of the iris appeared at the end of thirty-six hours. Eserine was then used, and the prolapse promptly reduced. Later, however, it again appeared, and the pupil was left somewhat distorted.

Simplicity.—As compared with the Graefe method and its modifications, "simple extraction" deserves its name, in that the iridectomy that it dispenses with is the most painful and one of the most delicate portions of the former operation, and that the uninjured iris is more readily reduced and kept wholly within the eye than the iris that has lost the tensile action of its sphincter. It prevents the extremely insidious accident of incarceration of the capsule. Again, the dangers of that serious complication, prolapse of the vitreous, are reduced to a minimum. Without rough handling, or especially unfortunate movement of the eyeball, it is scarcely possible for this accident to occur before the nucleus is delivered. Even in a case of dislocated lens with fluid vitreous the delivery of the lens was readily effected without the use of a spoon or loop, and no vitreous was seen until this had been accomplished.

Ease.—The statement is usually made that with simple extraction the delivery of the lens is slightly more difficult. But, in my experience, this is true only to a slight extent as to the complete removal of the cortical matter. The delivery of the nucleus is

not, to any notable extent, more difficult. I operated yesterday on a case where the lens was particularly large and the cornea small. From the other eye, in which the conditions were precisely similar, I had removed the lens several months ago, after a preliminary iridectomy, with a good deal of difficulty. The simple extraction was, if anything, the easier one. After the first operation a considerable amount of cortex remained in the capsule, and the same thing occurred with the second. Still, the removal of all remaining cortex is, I believe, a little more difficult after the simple extraction, though certainly not more dangerous.

Prolapse of the Iris.—The danger of this complication is the greatest drawback on simple extraction—about all that keeps it from being an ideal operation. When any considerable prolapse occurs it causes a distorted pupil, is liable to delay the healing, is followed by unusually high astigmatism, and if very large might endanger the eye. The impression is abroad that it is very much more likely to happen after simple extraction than after extraction with iridectomy, at least, it is scarcely counted as one of the risks of the latter operation. But iridectomy does not prevent the occurrence, except of the part of iris that has been removed. Indeed, in so far as it removes the restraining influence of the iris sphincter and leaves angles of iris floating within the eye, iridectomy directly favors incarceration, the form that prolapse assumes after it. Knapp has recently reported statistics of about 500 cases of simple extraction, with prolapse of the iris in 8 per cent. of the cases. It is probable that incarceration of a part of the iris at the angles of the wound is about that common among Graefe's extraction. In my own work prolapse has not been more common after simple extraction than was incarceration after iridectomy. More than this, the great mass of cases of prolapse under the use of eserine flatten down and cause as little trouble as the incarcerations after iridectomy, and do this without excision or any other special treatment, without notably delaying the healing, and so far as can be judged without any additional ultimate danger to the eye. I speak thus particularly about prolapse of the iris, for it was fear of it that kept me for a considerable time from giving up iridectomy. Still, prolapse of the iris is the chief danger of the method, and it should be carefully guarded against by the use of eserine, by keeping the patient as quiet as possible, by avoiding any pressure of the dressing or through the dressing on the globe, and by placing the corneal section as far away from the iris as possible, compatible with making it large enough to permit the escape of the lens.

Visual Acuteness.—The principal advantage of the simple operation is the exclusion from the eye of a large amount of very imperfectly focussed light, and the retention of the power of adapting the eye promptly and fully to the varying intensity of the light to which it is exposed. This advantage, although shown partly by statistics of visual acuteness, can never be fully exhibited in that way. An eye may be able to decipher even the smaller test-types, although their image on the retina is engulfed in a flood of unfocussed light coming in through distorted portions of the cornea opposite the coloboma left by an iridectomy. But even with only the ability to make out the same type, the vision secured by the exclusion of this useless and confusing excess of light is for all practical purposes far superior.

Again, we find in age the retina habitually guarded against even the light admitted to the younger nor-

mal eye by a diminished pupil; and the reversal of this, the flooding of the senile eye, with its slower nutritive processes, with an amount of light largely in excess of what it has been accustomed to, especially the crippling of its power to defend itself against sudden increase of illumination cannot but diminish its power of resistance to unfavorable influences, and lead to ultimate deterioration of vision.

It was watching the gradual deterioration that occurred in certain eyes that had been subjected to extraction, with iridectomy, that first made me desirous of trying the simple method.

Indications for Iridectomy.—I am not aware of any operator who proposes the abandonment of iridectomy in all cases. It is pretty certain that in at least one class of cases all will continue to practice it, namely, those in which from iritic adhesions or from other causes the pupil is extremely rigid and undilatable. The other indications for it are not so well agreed upon, but probably one of the most important of them is extreme restlessness and insubordination on the part of the patient. All of my cases of prolapse have been in patients markedly of that character. For the present most of us will be apt to fall back on iridectomy for a number of reasons, as I did in a case about a week ago where there was reasons to suspect a large lens and saccharine diabetes, so that I feared sloughing from a large corneal flap. But with myself, as with many others, the present tendency is to do iridectomy less and less frequently, and it is probable that the cases in which it is either necessary or desirable will ultimately be found to be few and far between.

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, October 28, 1891.

The President, JOHN B. ROBERTS, M.D., in the Chair.

INTERESTING CASES OF ABDOMINAL TUMORS,¹

WAS the title of a paper by DR. M. PRICE.

DISCUSSION.

DR. B. F. BAER: I have been much instructed and interested in this report of the cases of Dr. Price, and I was especially interested in the case of sarcoma. I have had five cases of fibro-sarcoma, and in none of these cases has the disease returned. One was operated on two years ago, another a year and a half ago, and the others at a more recent period. These were solid tumors. One weighed fifteen pounds, another nearly that, and a third five pounds. They were surrounded by peritoneum, but there were no papillary growths. I would infer from the report that in the case of Dr. Price the tumor was breaking down and papillomatous.

I have recently had a rather rich experience in regard to difficulties in the diagnosis of pregnancy. The most difficult operations that I have done in the last two years have been done in the past two months, in neglected cases diagnosed as pregnancy. One was a case of poly-cyst of the ovary, in which the physician was so certain of his diagnosis that the pains of which the patient complained were regarded as labor pains, and on two occasions the bed was made up for the accouchement. When the patient

¹ See page 405.

was *in extremis*, it was decided that she was not pregnant. In this case the adhesions were frightful, and the operation was very difficult.

The second case was operated on a week ago, and the tumor weighed about sixty pounds. The patient was thought to be illegitimately pregnant, and was sent to this city two months ago, to be confined away from home. She went down hill very rapidly. Two or three of her physicians thought that she was pregnant, but in this instance, as well as the first, the mistake was due largely to carelessness. They took it for granted that she was pregnant, and did not examine carefully. She was the weakest patient on whom I ever operated. There were firm adhesions to the liver, and I think a piece of the liver was torn off. The adhesions were universal, and the tumor was removed with difficulty. So far the patient is doing well.

DR. JOHN C. DA COSTA: I might speak of one recent case of interest in the matter of diagnosis. The patient was a woman forty-six years of age, who presented the symptoms of fibro-cystic tumor of the uterus. The only point against this view was the comparatively rapid growth of the tumor. There were two or three able men with me at the time of the operation. I found two tumors. The first one was enucleated, and seemed to be a true fibroid. The second looked like a fibro-cystic growth; but when it was cut open it was found to be a fibro-sarcoma. Hysterectomy was then done, and the uterus was found to be filled with sarcomatous tissue, although there had been no evidence of uterine sarcoma. Here we had three different conditions, two malignant and one non-malignant, but capable of change—sarcoma of the uterus, fibro-sarcoma, and fibroid.

DR. JOSEPH HOFFMAN: A point brought out by Dr. Da Costa's remarks is that a deferred operation is a dangerous one, because in all of these growths, especially those of a fibroid nature, degeneration is apt to go into something malignant. Sarcoma may take any form known to pathologists. Delay is, therefore, dangerous, and the idea of melting out tumors which are already practically on the road to malignancy by any means except radical removal, is foolish, and not supported by the clinical facts. I know of one case of mistaken diagnosis of pregnancy for ovarian tumor, by which, after a very minute examination, the woman was put in the Episcopal Hospital, and allowed to remain three or four months in order to confirm the diagnosis, although the diagnosis had been made. Where the uterus can be felt outside of a fibro-cystic tumor, I do not see how a mistake can be made. In obscure cases it is better to see what we are about by an exploratory operation than to make a diagnosis and hold on to it until time shows that we are wrong.

DR. WILLIAM E. ASHTON: The danger of fibroids undergoing malignant change is an argument in favor of their early removal. In the majority of cases, however, it is impossible to urge early operation, on account of the past education of physicians. We have been taught that fibroid tumors are of an innocent nature, and that when the woman reaches the menopause she will undergo certain changes which will result in the patient's recovery. I find, however, that the vast majority are not affected by the change of life. I think that in most cases in which oöphorectomy has been done in the hope of bringing about an early menopause, the results have been unsatisfactory. Another point is that a large number of these cases have diseased appendages. Many of these cases suffer pain, and this has been

ascribed to pressure; but I think that this pain is due, in many instances, to localized attacks of peritonitis due to the diseased condition of the appendages. Taking into consideration the fact that there is danger that the growth will become malignant, and the fact that the appendages are usually diseased, I think that it is the duty of the profession to educate the coming physician in regard to the necessity of the early removal of fibroids.

Dr. Price, in his case of appendicitis, refers to the adhesions being frail, and not trusting them. I think that if there is any doubt as to the pus being excluded from the peritoneal cavity, we should not hesitate to flush the abdominal cavity, and drain. In a case on which I operated some time ago, and in which the head of the colon was ulcerated through, I had the same difficulty. I got into the abdominal cavity and found pus. With thorough irrigation and drainage there was complete recovery.

DR. ERNEST LAPLACE: I was interested in the apparent triple nature of the growth in Dr. Da Costa's case. A word or two will explain this. The growths started as fibroid tumors. The life of this fibroid tissue may be longer or shorter. As soon as it dies it disintegrates and softens. The apparently triple nature of the lesion was due to the growths being of different ages. The growth that had retained its integrity was the youngest, and the others were older and had undergone degeneration.

DR. FRANK WOODBURY: In connection with the remarks just made in favor of operative treatment in uterine fibroids I might refer to one patient whose history shows that circumstances alter cases, and that it is difficult to lay down any general rule that will cover every individual instance. This particular patient has been under my observation nearly twenty years. In 1874 I was called to see a colored woman, about twenty-four years of age, who had almost continuous menorrhagia. She suffered with pain, obstruction of the bowels, and difficult micturition. Examination showed a hard cervix with the uterus enlarged and firmly adherent, occupying nearly the whole upper part of the pelvis. I treated her on common-sense principles, inserting Barnes's rubber air-bags back of the uterus, inflating them twice a day until I had stretched the adhesions, and lifted the uterus out of the canal into the abdominal cavity. She became much more comfortable, and for a year continued the use of ergot and chloride of ammonia alternately. After freeing the uterus I introduced a rubber ring pessary inflated with air. She became greatly improved, and passed from under my observation for some two years, when she returned with leucorrhœa. I found that the pessary had ruptured, and was almost imbedded in the vaginal tissue. I removed the remains of the pessary, and found a cicatricial ring forming a support for the uterus. The patient again disappeared, and was not seen until a year and a half ago, when she sent for me. She was then suffering with an acute attack of pain in the abdomen—probably something analogous to the pleuritic stitches which occurs in old cases of pleurisy. An able physician had seen her and decided that she was pregnant and in labor. The uterus had steadily increased in size and was much denser than before, and bosses could be made out on the surface. On one occasion I remember that I had a member of this Society, an excellent surgeon and pathologist, examine the patient with me, and he pronounced it a case of sarcoma on account of the stony hardness of the cervix. I subsequently had a consultation with Dr. T. Benton Massey, a fellow-member, well-known

to us all as an expert in electro-therapeutics, in regard to the applicability of electrolysis to the growth. At this time I tried to introduce an exploring needle into the growth through the abdominal wall, but found the tissue almost like bone; subsequently I turned the case over to Dr. Massey, who treated her with excellent results by the Apostoli method. Under this treatment the tumor has become distinctly smaller. She now suffers no pain or inconvenience, and menstruates without difficulty. As I stated at the beginning, I regard this as an exceptional case; but, on the other hand, I am not as yet quite prepared to subscribe to the propriety of performing laparotomy in all cases of fibroma uteri.

An interesting point is that in 1874 she was willing to have the uterus removed, and indeed suggested the operation to me, but as I was able to afford her relief without it, I dismissed it on account of the risk; moreover, these operations were not as familiar to us then as now. Her general health has been very good, she has suffered very little, and during these many years she has been comfortable and able to earn her living by housework. The notes of the case may be found by consulting Dr. Massey's book.¹

DR. CHARLES P. NOBLE: I wish to say a few words on the subject of the diagnosis of pregnancy. I think that there are cases in which the best of men may make a mistake in diagnosis as to the presence or absence of pregnancy. These are cases in which the pregnancy is complicated by a tumor, or cases in which the position of the uterus is altered, and in which the pelvis is more or less filled with inflammatory masses. I have myself seen one case in which I made a correct diagnosis at the fourth month of pregnancy, and after watching the case for two months gave up that diagnosis. It was afterward demonstrated that she was pregnant. The diagnosis in the first place was made partly from the physical signs and partly from the history, which was one of arrested menstruation for four months. There was a pelvic tumor continuous with the cervix, occupying the pelvis—apparently an adherent retroflexed pregnant uterus. After watching the case for two months, and finding that I could not hear the foetal heart-sounds nor detect the intermittant contractions of the uterus, which should always be felt at this time, I gave up the diagnosis and she passed from under my care. I learned that an autopsy made later showed that the woman was pregnant, and had a tumor of the anterior wall of the uterus, which prevented one from hearing the foetal heart-sounds and from feeling the intermittant contractions of the uterus. I can easily see how one might make a mistake where there was a uterine or other tumor in front of the uterus, but feel satisfied that if the cases are carefully investigated, mistakes of this kind will be very infrequent. It would be a great advantage to every practitioner if, when engaged to attend women in confinement, he would take every reasonable opportunity to become familiar with the feeling of the pregnant uterus. This is not only a great advantage to the pregnant woman and to the practitioner in the immediate case, but it also educates the physician to distinguish between different conditions in the future. Such a course would enable the practitioner to recognize deformities of the pelvis and malpositions of the foetus, and prepare for the proper treatment, and to become better acquainted with the rhythmic contractions of the uterus. The only circumstances in which error might arise would

be in cases of retained menstrual fluid, where the history would put you on your guard, and in some muscular tumors of the uterus which are said to present more or less typical intermittant contractions. Broadly speaking, when we have an abdominal tumor presenting rhythmic contractions, we can be satisfied that we have to deal with pregnancy. This sign is more reliable than the foetal heart-sounds for the reason that if the foetus is dead, or there is a large amount of liquor amnii, they are not to be heard.

DR. JAMES COLLINS: After the rich experiences brought forward on the other portions of Dr. Price's paper, I feel that I may detain you for a moment with a reference to the case of impaction of gall stones. These cases, I believe, are more frequent than one would suppose. I am glad that Dr. Price has given his experience. I recall two or three cases, and one especially, in which, after a long struggle and threatened obstruction of the bowel a gall stone the size of a pigeon's egg was passed, and the patient was relieved. In another case I begged the consultants to permit the abdomen to be opened, but they would not agree to it. At the autopsy we found that a large gall-stone had formed; that adhesive inflammation had taken place between the gall-bladder and intestine; ulceration had occurred, and then the stone had entered the bowel and lodged in the ileum, causing complete obstruction. This case occurred ten years ago, I have seen another autopsy in which a similar condition of things was found. I believe that this happens not infrequently.

DR. MARIE B. WERNER: The treatment of ectopic gestation has always interested me greatly. In discussing this subject with Professor Winckel, of Munich, I found his favorite way of treating it was with one to three injections of morphine (0.05) into the amniotic sac, feeling confident that absorption will take place. I asked him what he did in case of hemorrhage. He replied that the blood could be disposed of by the peritoneum. Subsequently, in conversation with Dr. G. G. Bantock, of London, in regard to the disposal of the blood, I learned that he considered operation imperative. He believed that the blood would not be entirely absorbed, but that portions would become organized and produce adhesions, provided the patient escaped death.

One of the cases reported by Dr. Price to-night clearly shows that nature would have been unable to dispose of the blood, since omentum and intestines were so completely covered with clots that he found it difficult to separate them, and proves to me that, aside from arresting the flow of blood, the necessity of cleansing the peritoneal cavity of foreign matter is distinctly called for.

These points have been of interest to me, and I thought that they might be of interest to the Society.

The President: I have been especially interested with reference to the tumors of supposed malignant nature in the abdominal cavity. The fact that we often make diagnoses of malignant disease which are not substantiated by the subsequent histological examinations must be borne in mind. I am reminded of a case which occurred in my practice two years ago, where there was an abdominal growth which I believed to be a malignant tumor of the colon. On making an incision I came down upon a growth attached to the internal surface of the abdominal wall, and, cutting through it, I found that it was a large growth of the omentum adherent to many coils of intestines, I felt sure that it was a sarcoma. I removed it as thoroughly as possible, probably getting it all away. It was referred to a competent pathologist,

¹ Electricity in Diseases of Women, 2d ed., Phila., 1890, p. 147.

and found to be simply a lipoma of the omentum. I had assisted a friend a few weeks before to remove a tumor almost identical in appearance, and this has shown itself clinically to be malignant. The determination of the question whether or not these supposed cases of malignant disease are really malignant or simply a softening, or colloid degeneration of tumors of a hard nature, is, I think, important.

DR. WILSON BUCKBY: Twenty-one years ago a bit of information was given me by Dr. Atlee, who may be said to be the Father of Gynecology, notwithstanding the pioneering of McDowell. He said that menorrhagia was due in ninety-nine cases out of a hundred to the presence of fibroid tumors, and that in the early stages they were amenable to medical treatment, and that the degenerative processes which take place are due to the neglect of the proper medical treatment in the early stages. I called him in consultation in a case of extreme menorrhagia, where the woman was almost exsanguine. He advised me to use sea-tangle tents, as was then the custom, and to make a thorough application to the interior of the uterus. He held that nine times out of ten the fibroid tumor was capable of being absorbed by his stimulating application, which consisted of compound iodine, iodide of potassium, and carbolic acid in glycerine. This was swept over the interior of the womb, and internally has given the old-fashioned ergot. My experience has been that in many cases this treatment will enable you, with benefit to the patient, to delay surgical interference.

DR. PRICE: In regard to my case of sarcoma, I would say that spindle-celled sarcoma is one of the most benign tumors of the uterus. I have had a number of cases, some of which were operated on a number of years ago, and they are absolutely free from disease. The tumor which I have reported was entirely of a different nature; it was attached to everything in the pelvis. The least touch would cause bleeding, and you could scrape out great handfuls of brain-like tissue. It was impossible to remove it all, on account of the adhesions. All that could be removed with care was taken away, and the patient is doing well. I do not believe she will remain well. Fibro-sarcoma or spindle-cell sarcoma of the uterus is a very curable disease, and almost invariably is non-adherent. When removed it gives no further trouble.

In regard to the question of concealed pregnancy, I would say that in neither of the cases I have related did the physician examine the patient at all. Most of us in treating these cases treat them by simply looking at them without any examination; but if we attempt to do this kind of work, I think that we should go to the bottom of the condition. I do not believe that there is such a thing as concealed pregnancy—such a thing as a child of any size in the uterine cavity or outside of it. It is not our duty to find it. If there is any question of doubt, we should wait until sufficient time has elapsed, for pregnancy, unless of the extra-uterine variety, gives no urgent indications for interference. The case referred to by Dr. Noble is one in which both the mother and child were sacrificed by attempting to remove what was thought to be an ovarian tumor. A little delay would have rendered the diagnosis clear.

I agree with Dr. Ashton in regard to appendicitis. I am confident that we are too timid in these cases. If there is the slightest shadow of a doubt as to the septum between the abscess cavity and the peritoneum, it is our duty to break through and irrigate the whole peritoneal cavity. I have seen my brother

operate for appendicitis five times through a median incision, tearing away all the adhesions and doing a complete operation. In the case I have reported, I tried to avoid opening the general peritoneal cavity, but when I passed two fingers to irrigate, I found that the peritoneum was opened, and I, therefore, loosened up everything and washed out the peritoneal cavity, and the result was favorable. A physician in this State was taken ill and appendicitis was suspected, but a delay of twenty-four hours was advised in order to clear up the diagnosis. The diagnosis was cleared up by the man's death inside of that time. If you suspect appendicitis, explain clearly to the patient the condition you suppose to exist and the danger of the two methods of treatment—the delay method and that by exploratory operation. An exploratory operation under proper surgical methods, with absolute cleanliness, has no business to cause more trouble than a simple vaccination.

Now in regard to hysterectomy. If there is a suspicion of malignancy, it is our duty to remove the uterus. If the tumor is a pure fibroma, and the woman is near the period of the change of life, it is our duty to let it alone. At the change of life the tumor undergoes retrograde changes. The same occur where the appendages are removed. In nine cases out of ten, the appendages are diseased, and they supply the stimulation to the growth of the tumor. The removal of the monthly congestion removes the cause of the growth, and at once you have a cessation of the growth of the tumor and the commencement of retrograde changes. The operation of the removal of the appendages is wholly useless in oedematous fibromas and fibroids undergoing cystic degeneration. In such cases it is folly either to wait or to remove the appendages; hysterectomy is the only treatment.

Dr. Collins has beautifully spoken my mind on the subject of gall-stones. In my case the transverse colon was immediately under the tumor, and there was nothing to hinder the occurrence of adhesions, ulcerations, and the discharge of the stone into the bowel; but in many such cases the patient will probably die from leakage into the peritoneal cavity. The ulceration may be outside of the position of the bowel, and it is our duty to open the abdomen and take out the stones.

A word as to the method of treatment mentioned by Dr. Buckby as having been recommended by Dr. Atlee. I have a supreme admiration for Dr. Atlee and the whole Atlee family. They have done more with McDowell for woman-kind in this land than any others, and have established on a firm foundation a condition of surgery that to-day, even in my own hands, has saved more than one hundred lives. The kind of fibroids that will be relieved by such treatment are not fibroids. They are either badly treated abortions or granular conditions of the endometrium: a condition that can be removed by the curette. Such a uterus is as smooth as a ball. It is not nodular.

I could wish no better example than the case cited by Dr. Woodbury as proof of the value of operative treatment. This poor woman was an invalid for twenty-two years, and was then treated with electricity by Dr. Massey—driving an electrode through the abdominal wall into the tumor. This is not Apostoli's treatment, and I congratulate Drs. Woodbury and Massey that they did not have a death instead of benefit from the treatment.

THE SIMPLE EXTRACTION OF CATARACT.¹

Was the title of a paper by Edward Jackson, M.D.

¹ See page 408.

DISCUSSION.

DR. PETER D. KEYSER: It is always interesting to hear of successes and of methods, but the term "simple extraction" is not appropriate as applied to the operation described this evening. The proper designation would be "extraction without iridectomy." This is going back to original methods, first practised with a simple lance, and which often resulted in prolapse of the iris. To obviate this Beer's knife was devised. The occurrence of prolapse also led to Graefe's method of modified extraction with iridectomy. In this way the lens escaped without unduly stretching the iris. The operation of extraction of cataract demands as much judgment as any operation in surgery. It is necessary to examine the lens and the iris carefully. If the iris does not react freely to light, showing that the tissue is inelastic, iritis is very liable to follow operation, unless iridectomy be done. In such case I precede the operation some weeks by a preliminary iridectomy. In properly selected cases, however, extraction without iridectomy is to be preferred, and in washing out the anterior chamber the use of very weak solutions of eserine with boric acid. Strong solutions of eserine are liable to cause iritis.

Cataract appears in so many different forms that much judgment is required, and the operation may be attended with as many, if not more, complications than any operation in surgery. We scarcely find two cases exactly alike; one may not require iridectomy, another does. In those cases where prolapse of the iris comes on some hours after operation, eserine is not of much value and cannot replace iridectomy. My experience has been such that I am forced to think that many of the cases reported without iridectomy required an iridectomy subsequently to the extraction—within twenty-four to forty-eight hours.

The method of opening the capsule is one requiring the most serious thought in the operation, and the removal of a large piece from the center is advisable. Laceration of an opaque capsule after extraction is a serious and dangerous procedure, and it is better to extract than to tear through on account of stirring up the vitreous with the knife or needle.

DR. JACKSON: I used the term "simple extraction," because it is a term commonly employed to designate the operation in question, and not to give the idea that cataract extraction was at all a minor or trifling operation. I think, though, that the term is strictly applicable, for the operation is distinctly simplified in certain directions. And in that it is more simple it conforms with the general tendency of surgical advance at the present time, which is toward the omission of various procedures that were formerly believed necessary, and the concentration of our attention on what is really essential, that it may be done in the best possible manner.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated Meeting, October 16, 1891.

SAMUEL KETCH, M.D., Chairman.

DR. ROYAL WHITMAN presented a patient illustrating the application of a brace for the more perfect fixation of the spine in disease of the middle dorsal region. The appliance consisted of two saucer-shaped pads, covering the prominence of the shoulders, connected by an unyielding steel bar,

passing across the chest; and two triangular hard-rubber pads, covering the lower two thirds of the scapulæ, connected by a steel bar. The Taylor back-brace was applied as usual, and the back-bar attached to its upper portion. The shoulders were then pressed back to their full limit, the front pads placed in position, and firmly attached to the brace by straps passing above to the neck-bar, and through the axillæ to the back pads, which held the scapulæ against the thoracic wall. Motion of the spine was thus confined entirely to the neck. Although the necessary movements of the arms were not restricted, forward reaching movements, which were always accompanied by flexion of the dorsal spine, were entirely prevented. This principle—the restraint of certain movements of the arms which tended to increase the existing deformity—was the point to which he wished to call the attention of the Society, as he was not aware that its importance had before been insisted on.

DR. R. H. SAYRE fully agreed with Dr. Whitman as to the necessity of keeping the shoulders back in this class of cases; but the difficulty hitherto had been to maintain such apparatus in proper position. In a paper which he had read at the recent meeting in Washington, he had called attention to the fact that when the disease was situated high up in the dorsal region, the plaster of Paris jacket did not give proper support, because it failed to hold the shoulders back, and that in such cases he was in the habit of employing pressure backward on the tips of the shoulders.

DR. NEWTON M. SHAFFER thought that the apparatus exhibited acted admirably in fixing the shoulders, but it was open to the grave objection that by exerting pressure on the scapular plates in this way the uprights are prevented from exerting the proper amount of pressure at the seat of the disease, and so the apparatus was not able to arrest the traumatism of respiration. He thought this was a defect inherent in the apparatus, and not, as Dr. Whitman believed, simply an accident, due to improper fitting of the brace to the patient's spine.

DR. WHITMAN replied that he thought the apparatus exerted all the pressure that the skin would bear, and that by slightly modifying the curve of the uprights the defect noticed by Dr. Shaffer would disappear. His object in presenting the apparatus was to elicit a discussion on the question whether or not it was desirable, in this particular class of cases, to attempt to control the forward movement of the shoulders.

BOND'S OPERATION FOR TALIPES VALGUS.

DR. A. M. PHELPS presented a young man whom he had been treating for a number of years for a very severe case of talipes valgus. Almost all methods had failed to give more than temporary relief, although in one instance there was no relapse in the case for a whole year. The patient constantly wore a support for the arches during the time.

The patient sought for relief, not so much on account of the deformity, as because of the severe pain which he suffered, and which prevented him from standing on his feet; without shoes, he could hardly walk. His occupation was printing.

In conversation with Dr. Bond, of Westminster Hospital, London, England, Dr. Phelps had learned of the operation which, in its author's hands, had been successful.

The operation performed by Dr. Bond was for the purpose of relieving the pain, which it certainly does.

He alluded to the operation, as "firing," the same as is done for the relief of spavin in a horse.

The operation consists in making transverse incisions with a Paquelin cautery, beginning at the inner malleolus, and extending one third of the distance across the sole of the foot, cutting through the cellular tissue down to the muscles. About four of these incisions suffice. Two semi-circular incisions are made, crossing the transverse ones. It seemed to Dr. Phelps that if the arch of the foot, before the operation is performed, were well shoved up in place, and held with plaster of Paris for a few weeks, that the shortening of the tissues in the sole of the foot by cicatricial contraction, would be more effectual, and would hold the arch in the normal position.

The operation when applied in this manner for the purpose of shortening the girders of the arch of the foot, is identical in principle with an operation which Dr. Phelps performed and reported to the American Orthopædic Association in 1889.

One objection which has been urged against the open incision method for talipes equinus, is that the scar is quite likely to be sensitive, and it is interesting to note that in this case the amount of the scarring being considerable, the patient walks upon the scarred tissues without any pain, and is able to work at his trade. The only support to the foot needed is an ordinary shoe slightly thickened on the inner side.

DR. R. H. SAYRE said that the amount of pain experienced in these cases of flat foot bears no relation to the amount of deformity. This patient's foot is still turned outward, and as in many other cases, when the foot is brought into the normal position, there is a very noticeable involuntary twitching of the peroneal muscles. The patient had been made comfortable once before for a period of a year, so that it was entirely too soon to say that the case would not relapse. As the arch of the foot is in large part maintained by the deeper structures, it seemed doubtful whether the scar tissue which did not go beneath the muscles, would be sufficient to hold up the arch, although at present it did this very well.

DR. A. B. JUDSON said that in view of the well-known fact that cicatrices after burns contract persistently and with great force, the operation was not only ingenious, but quite likely to prove successful.

DR. WHITMAN thought the operation absurd and extremely unscientific. No case of flat foot is cured until the important movement of abduction is perfectly free to its utmost limit. In the present instance abduction is not possible, and the case is only relieved, not cured. The only way to cure flat foot is by increasing the power of the muscles which support the weak portion of the foot.

DR. T. HALSTED MYERS said that as the pain in flat foot is largely due to periostitis about the attachments of the ligaments involved, and in the joint structures themselves, this operation with the Paquelin cautery might act beneficially by counter irritation, just as it does in many cases of joint disease elsewhere. Relief from pressure during the healing of the wound was also an important factor in the cure.

The President stated that if this procedure of Mr. Bond gave permanent relief from pain, that it would constitute a valuable accessory to our methods of relieving this troublesome symptom. In working people, in whom this deformity occurred most frequently, the question of a perfectly formed or perfectly acting foot was secondary. What patients wanted was, first, relief from pain; and secondly, feet that would give them an opportunity to earn a livelihood.

DR. PHELPS, in closing, said that the case was not presented as a cure for the deformity of hallux valgus, but that the flat feet seemed to be cured.

He had never observed periostitis in cases of flat foot, but he had frequently seen inflamed medio-tarsal joints, the result of pressure, and even the growth of new bone about the joints, precisely as is seen in severe forms of lateral curvature.

The scaphoid bone is really the key-stone of the arch, and when it is dislocated downward by the lengthening of the tissues in the sole of the foot, it causes great pressure. The patient will experience pain. This pressure long continued results in inflammation and growth of bone about the joint.

He thought it more scientific to shorten the girders of the sole of the foot than to do an osteotomy.

A CASE OF MULTIPLE JOINT DISEASE.

DR. R. H. SAYRE presented a little boy who had a strange combination of diseased joints, without any rheumatic history.

When about two years old the boy had a severe attack of scarlet fever, which was followed by an ischio rectal abscess and a double otitis media, which still continues. About ten months after the attack of scarlet fever he fell, and shortly afterward the left knee became swollen and tender. A splint was applied, and the knee soon appeared well. Shortly after this the right knee and the right hip joint became successively inflamed. He was then treated for about a year by traction, first in bed, and afterwards with a long traction hip-splint. After this the left knee, the right knee, and the left shoulder became successively inflamed, and so severe was the inflammation in the shoulder that, at one time, it was almost completely ankylosed. In 1888, after an injury, the right knee and right hip became swollen and tender, and it was at this time that the case first came under his observation. After the flexion had been overcome, a splint was applied, which produced traction on both the knee and hip-joint. Photographs were exhibited, showing the case with the splint applied. Last July it was considered safe to remove the splint. At present he has no pain; extension is good, and flexion can be made to a right-angle. There is almost perfect motion at the hip-joint. He had looked upon the joint lesions as probably tubercular, but it was possible they were metastatic.

DR. H. L. TAYLOR did not believe the joint lesions were tubercular.

The President also thought the whole clinical history pointed away from tubercular disease, and that the scarlet fever had probably given rise to a rheumatoid condition.

DR. A. M. PHELPS said the trouble was either rheumatic or metastatic, and as the joints did not suppurate, the former was the more probable origin. While the application of the splint probably assisted in bringing the case to so favorable a termination, it was quite likely that constitutional treatment alone would have been sufficient. He had been misquoted with reference to the occurrence of flexion at the hip joint. Where the whole number of cases have been reported, he believed the statistics would show that not 5 per cent. have recovered without angular deformity, yet he believed that not one single case of hip-joint disease need recover with angular deformity.

DR. SAYRE said that it was not material to this discussion whether the joints were tubercular or septic. The point he desired to bring out was, that no matter what the nature of a long-continued inflammation of a joint, protection of that joint is neces-

sary. He agreed with Dr. Phelps that no case of hip-joint disease ought to have angular deformity.

AN UNUSUALLY SEVERE CASE OF CONGENITAL LATERAL CURVATURE.

DR. R. H. SAYRE, presented such a case. The patient is now fourteen years of age, but her mother says that at birth the deformity was nearly as great as now. It was one of the most severe congenital cases he had ever seen, and she first came to him one week ago. Examination at that time showed that between the lower and upper ribs was a large V-shaped gap through which the liver could be felt. At the age of six years, she had pneumonia, and shortly after this, an abscess, which was probably connected with the pleura, opened through the right thoracic wall. Her breathing is puerile; there is no cardiac lesion. At the time of her birth, the child presented transversely, and the labor was difficult, so that it is possible that this may have had something to do with the deformity. He thought all the ribs were present. When first seen, her height was four feet six and three-quarter inches; but after being suspended, there was a gain of five-eighths of an inch. He desired to call particular attention to this increase in the height as the result of the suspension. In another case, between September 5th and October 15th, there had been a gain of three-fourths of an inch; in another, there was also a gain during a month of treatment, of three-fourths of an inch, and in still another, which measured before treatment four feet nine and seven-eighths inches, the measurement after about a month was five feet one and one-eighth inches.

DR. H. W. BERG said that the mere fact that the patient had such excellent use of her limbs would show that the curvature was not due to a lesion of the brain or spinal cord. If the ribs were congenitally absent, there would be sufficient cause for the curvature, without supposing any injury during labor.

DR. JUDSON remarked that the case was an illustration of the fact that in lateral curvature the kyphosis is sometimes very considerable, and may be as serious as in Pott's disease.

The President said that some years ago he had called attention to the frequency of lateral curvature in very young children, most of which he believed to be of congenital origin. He had repeatedly urged the necessity of the careful examination of infants' spines, as a matter of routine, and thus, were deformity present, an early opportunity for treatment. He believed that were this done, we should not see such distressing deformity as Dr. Sayre had presented. Quite recently Dr. F. Beely, of Berlin, had pointed out that in these early cases of scoliosis, the bones of the head were not symmetrical. The case just presented was instructive, as showing how great may be the deformity in cases which have not had the benefit of early and judicious treatment. Notwithstanding, the deformity develops very slowly. So many cases apply for treatment with the deformity well marked, that he was inclined to believe that a large proportion of all cases of scoliosis in children are congenital.

DR. V. P. GIBNEY presented a case of hip disease showing

A REMARKABLE RECOVERY BY NATURE'S METHODS.

A boy of eight years was admitted to the hospital in 1882, with disease of right hip in second stage. Family history, tuberculosis. Disease dated back to the previous April. On admission, he was fairly

nourished. Hip flexed to 100° and held in this position. *Practical* shortening of three and three-fourths inches. On July 7, 1883, flexion had increased to 135° , and an abscess filled the whole gluteal region. On October 12 the abscess opened. November 16 he had become greatly emaciated, pale and waxy, the thigh acutely flexed on the abdomen and abducted, the head being apparently dislocated on the dorsum, while the whole thigh, from the junction of the lower and middle thirds to the trochanter major, was undermined, and large quantities of pus were discharging from two sinuses. Could only sleep with the aid of two drachms of the U. S. solution of morphine, and his condition was so bad that it was thought there was no chance of his recovery, and he was advised to be taken home. On the 27th of November, he was visited by a member of the House-Staff, who found him suffering from diarrhoea and night-sweats, with poor appetite, a pulse of 130, and a temperature of 101° . On the 7th of December his condition was about the same, except that a bed-sore as large as a half dollar had formed over the trochanter on the sound side. Not seen again until October 14 of the present year, when he returned, looking hale and hearty. He said that after leaving the hospital he had been confined to bed for one year and a half, and had then begun to go about on crutches. For the past four years he had been wearing a five-inch high shoe. The site of the old abscesses, and of the bed-sores are marked by very large cicatrices, the angle of greatest extension is 100° , and that of greatest flexion, 90° ; the abductors are very tense. His measurements are as follows:

R. A., $27\frac{1}{2}$; R. U., 30; R. T., 6 in.; down, $13\frac{1}{2}$; R. K., 12; R. C., $10\frac{1}{4}$.
L. A., 29; L. U., 36; L. T., 6 in.; down, $17\frac{1}{4}$; L. K., 13; L. C., $11\frac{3}{4}$.

THE NECESSITY FOR EARLY MECHANICAL TREATMENT IN INFANTILE PARALYSIS.

DR. W. R. TOWNSEND read a paper with this title, calling attention to the various stages of the disease. The methods of making a prognosis as to return of power and as to deformities resulting, and demonstrating the value of mechanical treatment in all stages, but especially in that before the appearance of deformity as a method of prevention.

DR. H. W. BERG called attention to the importance of avoiding heavy apparatus which often seriously interferes with the paralyzed muscles. In addition to this, all such apparatus should be applied from a *healthy* fixed point of support. One of the most troublesome symptoms in long standing cases of infantile paralysis is the low surface temperature. He had given relief in two recent cases by wrapping the limbs at night in cloths wrung out of ice-water, and covering these with warm bed-clothes.

DR. WHITMAN said that the author spoke of equinus and equino-varus as the most common deformities in untreated cases. Equino-valgus he thought, to be the most common deformity in treated cases, and it was very difficult to prevent.

DR. SHAFFER said that in the fourth stage where contractures occur, and paralysis are very pronounced, he had met with a very surprising series of cases. He had records of four cases of equinus in adolescents and adults, where the anterior tibial muscles and the quadriceps extensor femoris were involved, and the patient sought relief on account of the deformity of the feet. He had by means of his antero-posterior traction shoe, restored considerable power to these muscles. Another important point was the improvement in the nutrition of the feet resulting from this traction. One patient used to come periodically, as

she expressed it, to "get her feet warm." Not only would the feet get warm during the application of the traction, but they would remain so for the rest of the day. He had never seen such results follow the use of electricity and massage, and similar methods of treatment, with or without tenotomy. Of course, in calcaneus cases, this traction cannot be applied, and hence, these desirable results cannot be obtained. The cause of the improvement seemed to be the peripheral nerve irritation occasioned by the traction, exerted principally upon the gastrocnemius and all the other resisting tissues. He had known the calf circumference to increase half an inch by actual measurement during a month of this treatment.

DR. R. H. SAYRE thought that one explanation of the increased power of the quadriceps extensor could be found in the fact that the feet were placed in a position where they can be used more advantageously.

DR. JUDSON considered the paper worthy of much attention, and it was a matter of congratulation that the profession at large already recognized the importance of sending these cases to orthopædic surgeons.

DR. H. L. TAYLOR thought that we might go even further than the author, and state that a very large majority of the deformities of the lower extremities are preventable by proper orthopædic treatment. A very badly deformed foot from slight paralysis will often prevent the use of many muscles; and even where muscular power cannot be restored, proper mechanical treatment will often secure to the patient very respectable locomotion. Mechanical treatment, by enabling the patient to go around more naturally, will often increase the warmth of the limbs; but for very bad cases he had, for a long time, made use of hot, dry air, or of two woolen stockings, one underneath and the other over the brace, to keep up the proper temperature of the parts.

The President said that it was a popular idea that braces tend to bring on increased weakness of limbs, and various disorders; and, until recently, the great obstacle to beginning mechanical treatment in the early stages has been the opposition of parents and of the attending physician. Within the last year he had seen two or three cases quite early, and had noticed a stage of tenderness, which might possibly prove a temporary contra-indication to mechanical treatment. He did not think this condition had been mentioned very generally by orthopædic writers.

DR. WHITMAN said that he had many times met with this condition.

DR. TOWNSEND, in closing the discussion, said that he thought much of the opposition to braces arose from the fact that orthopædic surgeons were not agreed among themselves as to what kind of apparatus was most suitable for the treatment of the different classes of cases. He desired to emphasize the importance of that part of the paper which refers to the experiments of Mr. Young on electrical examinations of muscles. If, by such an examination, one could ascertain that in a given case contractures and deformity would result, the task of persuading parents to allow their children to receive early orthopædic treatment would be a much easier one than now.

The Polyclinic.

CHILDREN'S HOSPITAL.

DR. MEIGS presented a case of tinea tonsurans, and gave the following treatment, which he said had been used with great success in the hospital, after other means had failed.

Solution No. 1 :

R.—Potassii iodidi..... 3ss.
Liq. potassii 3j.

is rubbed thoroughly upon the affected area, with a piece of lint or rag, until the scales are softened and removed.

Solution No. 2 :

R.—Hydrarg. bichloridi..... gr. iij.
Sp. ætheris nitrosi..... 3j.

to be applied with a piece of cotton or rag after Solution No. 1 has been well rubbed in.

Solution No. 1 loosens the scales and breaks up the crusts, which, to some extent, exist upon the head, so that the bichloride solution may find its way into the hair follicles and destroy the parasites, which it would not reach if the crusts were not previously softened and removed.

COOPER HOSPITAL, (N. J.) NOTES.

THE TREATMENT OF VAGINISMUS.

VAGINISMUS consists of hyperæsthesia of the vulva, coupled with involuntary and painful contractions of the sphincter vaginae. The slightest touch causes pain. It was formerly considered a distinct affection, but is now recognized as symptomatic of diseases of the uterus, vagina, rectum, or bladder. The cause, therefore, should be looked for, before treatment is instituted. Endometritis, vaginitis, inflamed hymen, ulcers at the vaginal orifice or urethral caruncles may give rise to it.

The treatment instituted by the late Dr. J. Marion Sims, in 1861, consisted in dividing the superficial fibers of the sphincter muscle on either side of the vaginal orifice near the fourchette, for the purpose of overcoming the painful and involuntary contractions of the muscle. Equally good results, however, may be obtained without resorting to the knife. After subduing the sensitiveness of the parts by the judicious use of cocaine, forcibly dilate the vaginal orifice with the thumbs to the extent of overcoming involuntary contractions; look for local ulceration around the orifice or other local causes; treat the cause in the manner indicated, and insert a tampon of cotton medicated with glycerine and tannin into the vaginal orifice. This should be daily repeated, and the vagina flushed with an antiseptic douche before the tampon is re-instated.—*Godfrey.*

FRACTURED CLAVICLE.—The difficulty of retaining a fractured clavicle in place is very great in the case of children. A wild, roystering little chap, six years old, broke his left clavicle; a clean, horizontal fracture, no green-stick affair. It was easily reduced; but the second day afterward he tumbled down a long flight of stairs. Next day he had a fight, and within two days more he fell off the fence and out at the tail end of an ice-cart. After each mishap the carefully-adjusted dressings were reduced to a chaotic state, and the bone overlapped. He was finally secured in this manner: The bone was replaced, the arm put in the Velpeau position, and a plaster bandage applied in the Velpeau manner—over a flannel bandage. This proved effectual, and the boy made a good recovery, no amount of rowdiness disturbing the dressing.—*Waugh.*

The Times and Register

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DIPHTHERIA.

IN our next number we propose to devote considerable space to the subject of diphtheria, giving Dr. Brayton's excellent address before the Camden County Medical Society, and the treatment in force in the hospitals of Paris, with such other material as can be gathered together. Just now this disease is quite prevalent, not only in Philadelphia, but in nearly all our large cities. With sixty-three deaths last week in Philadelphia from diphtheria (including croup), we infer that the disease is exceptionally virulent, or else that there is something radically wrong in the treatment. From a study of the cases coming under our own observation, we are unable to find any extraordinary malignancy in the present outbreak, and can only conclude that the mass of the profession is ignorant of the best methods of treating this disease. In the history of diphtheria we have the record of a continual conflict between the rooted belief of the profession in the constitutional nature of this disease, and the striking results of treatment by local medication.

BUSINESS OR PROFESSION.

A DISPATCH from Cumberland, Maryland, states that considerable indignation has been aroused over the action of Dr. Craigen, in cutting out the stitches in a wound because the patient was unable to pay the fee demanded. Our readers will remember that a similar case occurred in Chicago, where a worthy physician was seriously injured in reputation by the sensational accounts in the newspapers; although the facts in the case were such as to cause the magistrate before whom suit was brought to throw the case out without listening to the defense. Perhaps if a few more such cases occur, the public will realize that the physician is not a public functionary, at every one's beck and call, pay or no pay; and that if the public desires him to hold such a relation towards it, the public must assume the charges of his support.

Dr. Craigen is a graduate of the University of Pennsylvania, in 1859; and may be presumed to have practised too long to offend as grievously against the laws of humanity as would be indicated by the newspaper accounts.

ELECTRO-THERAPEUTICS.

THE present number contains several very interesting articles upon electro-therapy, selected from the papers read before the American Electro-Therapeutic Association, at its first annual meeting in this city. Other papers from the same source will follow, so that before the close of the present volume we hope to present our readers all the material of practical value emanating from this meeting. And it is doubtful if a series of papers of equal value could be supplied on any other special topic. Electricity is one of the brightest spots in medicine to-day. It represents one of the principal foci to which bright intellects are attracted, and from which light is diffused. Electricity is seeking to mitigate the Draconian law that condemns the uterine appendages to capital punishment for the slightest offense, disdaining all thought of curative therapeutics. In spite of the length of time that has elapsed since electricity was first introduced as a therapeutic agent, and the number and high character of the men who have worked at its development, the limits of its applicability have not yet been reached. Nor is its use confined to a limited number of specialists, for it is not easy to find a practitioner, at least an intelligent and progressive one, who has not in his office the constant and faradic current batteries. In this, as in most cases, the public is quite ready to support the physician who has enterprise enough to keep up with the times. New methods are popular; new apparatus pleases the public. A new method of treatment, with a new form of mechanism, although purely experimental, will be chosen unhesitatingly by nine patients out of ten, in preference to old and tried methods. So goes the world, and we must go with it.

Letters to the Editor.

ELECTRIC BATTERIES.

I WANT some information in regard to batteries. Do you know whether or not the following batteries are reliable, namely: "Florence," "Phenix," "Manhattan;" the last has two cells, six currents. Give your preference. Manhattan costs \$18.00, can buy for \$9.00 wholesale; Phenix costs \$14.00, can buy for \$7.00 wholesale; Florence costs \$8.00, can buy for \$4.00 wholesale. If you would not advise me to buy either, suggest the name of one you would. Are not the Waite & Bartlett galvanic batteries among the best? I wish to purchase a galvanic also. Also, best work on electricity.

J. T. BENNETT, M.D.

HARDINSBURG, IND.

[The Florence, Phenix and Manhattan faradic machines are all varieties of cheap induction coil instruments, commonly called "batteries," and are about equally unreliable.

You state that while the "Manhattan" sells for \$18.00 at retail, you can buy it for \$9.00; which fact is alone sufficient to stamp its cheap construction, and probable short life.

There are none of these small, low-priced machines that are of much use. Either they wear out promptly or fail to respond when called upon in an emergency, and are a constant source of annoyance. It is much better to buy a good instrument at first, even if the cost is greater. I have a Flemming portable in active service now, which has been doing hard work for ten years, and is as good as new. As to the galvanic batteries, my advice to general practitioners has always been, never purchase any form of closed cell, whose parts are not promptly and easily to be gotten at, replaced or repaired by the owner, with slight expense and no loss of time in sending away.

So far, I know of no form of galvanic cell better than the rubber Grenet, fitted with efficient hydrostrat, as made by Flemming, McIntosh, Sample, of Chicago, and some others. Perhaps Hutchinson's "Practical Electro-Therapeutics," to be obtained from Medical Supply Company, 1725 Arch street, Philadelphia, will do as well as any single book for reference.]

"SOME HOSPITAL, CONSIDERATIONS."

AN editorial in your columns, signed by Dr. S. V. Clevenger, criticises an editorial of mine in the *Medical Standard* in a way that shows a total miscomprehension of the editorial. The editorial in question (as can be seen from its citation hereinafter) was a plea for complete medical control of training schools.

More than a decade ago a Chicago medical journal said anent the trained nurse dodge, then in process of incubation: "The idea of a training school for nurses certainly presents much that is roseate, and, to judge from the general outcry on the subject, that is the entire hue of the question. The change from the Sairey Gamps and Betsy Prigs of the past to the trained, intelligent young ladies of the future is certainly a great and desirable one. The theory of the relations between the physician and trained nurse is excellent. And there is also something pleasant in the idea of furnishing employment for educated women, of a nature that is not degrading. These are all pleasant features of the picture, but is there no opposite side to it? Is there not a possibility that the trained nurse, aided and abetted by lady philanthropists of the Jellaby stripe, may come to regard 'nursing' of more value than medical treatment and indulge in therapeutic vagaries of her own, to the neglect of the physician's. This question has already been answered in England, where the surgeons of Guy's Hospital have been reduced to a state of subjection by the nurses and lady 'philanthropists' of the vicinity. As a result, one of the 'trained' nurses was convicted of manslaughter for giving an unordered cold bath to a victim of meningeal tuberculosis."

These views have been more than justified by recent developments in the training school then established to control Cook county hospital by hysterical and paranoiacal female philanthropists compared with whom Mrs. Jellaby was a far-sighted humanitarian. In 1888 the wards of the county hospital were shut up under pretense of economy, and patients were pauperized by being shipped to the poorhouse; but no protest came from the training school until the *Medical Standard* shamed the County Board into disavowal of the practice, which, nevertheless, was slyly continued until the jobbers of 1889 went out of power. A warden with humanitarian instincts, appointed in 1890, suddenly found his wards crowded with cases. The resentment thereanent of the training-school allies of the previous jobbers evinced itself in attacks on this warden. Nurses were so intent on gathering scurrility for this purpose that they neglected to feed their patients. The same evil occurred in 1891, and investigation as before demonstrated that the most neglectful officials were the "trained" nurses who were too ethereal creatures to perform certain ordinary duties, which patients had to do. On both occasions these nurses were supported in performances

so ruinous to the discipline of an hospital by paranoiac "philanthropists," whose husbands were business, social, and political allies of the "stone-road" and "green" meat jobbers of 1889, and who, hence, resented conscientious performance of duty by county officials. Destruction of influences so ruinous to discipline is obviously the first step to be taken to reform the hospitals. This can be done, as suggested by Dr. Brandt, by the creation of a training-school under medical control alone. The next step is to make the executive officer supreme. At the termination of the present year a medical man should be the chief executive officer.

It is evident that had Dr. Clevenger read the editorial carefully, his plea for medical control could have been strengthened.

JAS. G. KERNAN, M.D.

The Medical Digest.

EREDE says that sulphonal, in doses of $7\frac{1}{2}$ to 15 grains, suppresses the night-sweats of consumption with certainty, one dose answering for several days.

DYSMENORRHOEA.—During the past two months seven cases of dysmenorrhoea have presented themselves for treatment. In each case antikamnia gave relief, and that in the small dose of $2\frac{1}{2}$ grains every two hours.—Waugh.

EMULSION OF IODOL.—

R.—Iodol..... gr. xv.
Glycerin..... 3iiss.
Water..... f3v.
Acacia..... gr. xxxviiss.

—Trouchet.

ROBERT pronounces hydrogen peroxide a valuable antidote for hydrocyanic acid poisoning. Lethal or larger doses could be given daily for weeks to animals if the peroxide were injected in 15-minim doses when the toxic symptoms appear. It should also be given internally as long as the symptoms and odor of the poison are manifest.—*Am. Jour. Phar.*

OBESITY AND STERILITY.—In the *New England Medical Monthly*, McKee calls attention to the great frequency of sterility in obese women. Both sexes are alike sterile when over-fat. The observation is not new, Hippocrates having noted the connection between obesity and sterility in the Scythian women. The sterility depends, however, principally upon the co-existence of amenorrhoea, or other menstrual disorders.

YAMP; OR, CARUM GAIRDNERI.—This is a plant found in Wyoming and other parts of the West, where the tuberous roots are used as a food by the Shoshones. The taste is said to resemble the blended flavor of the nut and the parsnip. Trimble (*Amer. Jour. Pharmacy*) gives the following proximate analysis of the dry tubers:

Fat, wax, and caoutchouc.....	1.03
Resin, soluble in ether fort.....	.53
Saccharose.....	10.98
Glucose.....	5.32
Mucilage and albuminoids.....	29.20
Pararabin, etc.....	2.75
Starch.....	5.35
Moisture.....	14.65
Ash.....	3.62
Insoluble and undetermined.....	26.56

100.00

CHANTEMESSE states that the bacillus coli communis always causes fermentation of sugar; which the typhoid bacillus never does.

FOR PAINLESS UTERINE DILATATION.--

R.—Sulphuric ether..... 3ij.
Iodoform..... 3ij.
Pure cocaine..... 3j.
M.—Steep in this the laminaria tents for eight days.

LABORDE claims that strontium salts are not toxic, but that they affect nutrition favorably, promote appetite and digestion, are antiseptic and germicide. They are more easily tolerated than potassium salts, and active in one-half the dose. The lactate is especially useful as a diuretic.

THE therapeutic employments of tobacco appears to be singularly rare, when we consider the universal use of this plant as a habit. Dr. J. F. Bird recommends smoking a cigar as a means of shortening the first stage of labor. (*Medical Bulletin*.) The production of nausea by this means has the same effect as when it occurs naturally; the rigid os relaxes, dilatation goes on rapidly, the perineum yields, and the uterine contractions proceed unchecked.

MOUTH-WASH.—

R.—Saccharini..... gr. xxxviiss.
Acid. benzoici..... " xlv.
Tr. rhataniae..... 3ij, Mxliv.
Alcohol absolut..... 3xxv.
Ol. menthae pip..... Mviiss.
Ol. cinnamomi..... Mviiss.
M.—S. Three parts of this to 27 parts of a 4 per cent. solution peroxide hydrogen.

—Miller, in *Cosmos*.

A WOMAN had been drinking steadily for a long time; until at length her digestive organs began to resent their abuse. The abdomen swelled, the stools became clay-colored, the appetite was lost, and even whiskey became temporarily distasteful.

The patient was put to bed, fed exclusively on hot clam broth, made with milk and liberally seasoned with capsicum, and the arsenite of strychnine (Abbott's half milligram granules) given every two hours. She improved rapidly.—Waugh.

INVETERATE NEURALGIA.—Sometimes, in chronic neuralgic cases, acetanilide fails to give relief in small doses; and when the dose is increased, toxic symptoms are manifested, and yet the severity of the attack is unabated. In two such cases lately, I have given antikamnia, in doses of $2\frac{1}{2}$ grains, repeated hourly, and in both had the satisfaction of seeing the pain quelled and the patient comfortable before fifteen grains had been administered. Whether antikamnia is or is not a compound containing acetanilide is of very little consequence beside the question of its superiority to the latter as an analgesic agent; and this is now pretty well established.—Waugh.

COCILLANA.—The principal uses in which I have found this remedy to exert its most important influences are as follows: As a local application, used in the form of a spray, of a diluted solution made from a fluid extract, in acute coryza; and in the more chronic stages, beneficial results are plainly recognized. In hay asthma, some passive results were obtained. The same impressions are likewise secured by the repeated administration of small doses, by which means the entire mucous tract is easily reached. In spasmodic laryngitis of children, carrying the dose

to the point of nausea will be found not to be transient, but permanent, in the results. The most inspiring uses for this drug, however, are in bronchitis, and more particularly in the secondary stage of pneumonia. The therapeutic reports of such cases—as I have freely extended its uses—are numerous, and I am gratified to state, with much authenticity, that I have had the most promising behavior in its use in all conditions of broncho-pulmonary diseases wherein the drug has been used, and, without exception, save slight nausea, I had no cause to regret the administration of this new and valuable remedy.

—Eckfeldt, *Med. Bulletin*.

GLANDERS AND MERCURY.—Koudorsky, in the *Vratch*, reports a case he has cured by means of this drug. The diagnosis was confirmed by the presence of the microbe and inoculation. He opened the abscesses freely, and washed with 1 in 500 solution of sublimate; the ulcers were irrigated with the same lotion and then brushed over with nitric acid, while mercurial inunction was diligently carried out daily. The patient was a laborer, aged twenty-nine years, admitted to hospital on the 15th day of the disease, and was dismissed after seventy-two days quite well, and temperature normal. The toxic symptoms of the drug appeared on the 62d day in the form of stomatitis.

PISTOL-SHOT WOUNDS OF THE BRAIN.—The caliber of a ball which penetrates the skull determines the probability and the time of death. Whether it be due to the violence of the primary cerebral shock, the compression from deep-seated intra-cranial hemorrhage, or septic infection, death within less than forty-eight hours generally follows penetration of a thirty-eight or forty-four caliber ball, even though in its course it has spared cardiac and respiratory centers. If not primarily fatal, fractures by projectiles of larger caliber may be likened to the open compound fractures with solutions of continuity in bone and dura large enough to permit of free drainage, and therefore they offer some promise of recovery. The wounds made by small weapons, on the other hand, greatly resemble the punctured fractures which are just dreaded for the certainty with which irritative and destructive changes follow in their wake.

When the surgeon arrives at the bed-side of a person who has made a suicidal attempt with a revolver of small caliber, cerebral shock, if at all present, has probably subsided. The patient may be conscious, but depressed. He may complain of headache. There is no paralysis. In the temple there is an opening not larger than the end of a lead-pencil, filled with a blood-clot. Hemorrhage, if not altogether arrested, is trifling. There is no conceivable condition in which the temptation to adopt an expectant therapy is greater. If yielded to, an aseptic dressing is applied and the results are patiently awaited. They are ordinarily not long in coming. Slight rise in temperature after the first day, headache more or less intense, delirium, mono or hemiplegia within the week, followed by coma and death. The autopsy reveals ordinarily that the missile is less responsible for the fatal issue than the retained wound secretion. The aperture in the skin is smaller than that in the cranium, and smaller than either is that in the dura. Indeed, the latter, through retraction of its fibrous tissues, is often smaller than the caliber of the penetrant ball. Within the brain, even a small bullet deflected from its course may cut a swathe half an inch in diameter. Retention and infection of the blood

and brain detritus fully account for the progressive development of the clinical phenomena during life.

The objects of an operation are twofold. First, to secure free drainage; secondly, to remove, if it be possible, the bullet. There can be no question but that those cases recover best in which both ends are attained. Of cases in which the missile was removed, only thirty-four per cent., while of those in which it was inaccessible fifty-eight per cent., succumbed (Wharton). But it may be that the more favorable issue in the former category is due to the fact that in them the bullet was near the surface and the damage to the brain proportionately small.

Certain is it that even with the aluminum gravity probe of Flührer the search for a small projectile, deeply seated in the brain, and often deflected from its initial course by bone or dural process, will, as a rule, be futile. On the other hand, the more important object of the operation, drainage, can very often be attained.—Ransohoff, *Lancet-Clinic*.

FRENCH NOTES.

A. E. ROUSSEL, M.D.

HYDROCHLORIC ACID IN DIPHTHERIA.—The experiments of Roux and Yersin have established that the virulence of diphtheritic *toxines* may be greatly diminished by adding to the products of the secretions of the bacteria a small quantity of acid. Starting with this idea Dr. Krazenski has employed hydrochloric acid in the treatment of six cases of croup in children from six months to three years of age, and in five cases of diphtheritic angina, two cases occurring in children and three in adults.

The following formulæ were employed:

R.—Perchloride of iron..... 1 drachm.
Medicinal hydrochloric acid..... 15 minims.
Distilled water..... 6 ounces.

Mix.—Take at first one teaspoonful every fifteen minutes for four doses, then every thirty minutes for three or four hours, finally the dose is repeated every hour.

R.—Perchloride of iron..... 2 drachms.
Hydrochloric acid..... 15 minims.
Distilled water..... 1 ounce.

Apply locally to the parts every two hours in diphtheritic angina.

In addition, the author employed gargarisms with a solution of toric acid 4 per cent., and in cases of croup a solution of sulphate of copper 1.5 per cent., taken internally as an emetic when the necessity arises.

In eleven cases the duration of the treatment varied from two to five days. All the patients recovered. Of the five cases of diphtheritic angina, in four cases the false membranes definitely disappeared at the end of from twenty-four to forty-eight hours. In the fifth case one week elapsed before the cure. The cases of croup were cured in from three to five days.

THE TREATMENT OF ULCERS BY THE APPLICATION OF HEAT (Dr. A. Stepanoff).—As the result of his observations the author arrives at the following conclusions:

1. The local application of heat to the treatment of cutaneous affections, as well as those of the deeper structures, should occupy a more important place among other methods of treatment.

2. All ulcers, syphilitic or otherwise, invariably yield to this caloric treatment.

3. The favorable action of the heat is particularly exhibited by the regularization of the circulatory phenomena and the nutrition of the affected parts.

4. The engorgement of the blood in the inflammatory zone rapidly disappears under its influence.

5. Heat undoubtedly exercises a favorable influence on the pains produced by the inflammatory process of the ulcer and tissues underneath.

6. The caloric treatment produces favorable results only when the applications are continued for seven or eight hours each day.

7. This treatment, employed by means of rubber sacks filled with hot water, should be performed to the use of hot poultices, compresses, etc.

8. The application of heat in hospital treatment should be regularly organized, in order that a large number of patients may partake of its benefits.

9. This prolonged application of heat does not produce any irritation of the skin if certain preventive measures are taken.

10. The caloric treatment presents two advantages: (a) The time of the patients stay in the hospital is considerably reduced. (b) The financial expenses are usually reduced by the method.

—*Revue de Thérapeutique*.

Medical News and Miscellany.

DR. F. D. CLARKE, of Chicago, left an estate valued at \$125,000.

RUSSIA reports the influenza as starting on another trip around the world.

In Paris there are published 145 medical journals, 8 pharmacal, and 161 lay journals.

THE overcoat thief has reappeared, and appropriated Dr. Hudder's ulster last week.

IBSEN is said to have commenced as a druggist's apprentice in Norway, and was afterwards a medical student.

DR. E. D. BIDDLE (Missouri Med. College, 1880,) has removed from Mt. Carmel, Ill., to a larger field of practice in Evansville, Ind.

AN inspector of Dusseldorf claims to have found trichinæ in some pork that had been pronounced sound by the American inspector.

THE women physicians, pharmacists and dentists of Illinois intend to prepare an exhibit to be made in the Illinois State building, at the great fair.

THE Department of Electricity is making an effort to secure a complete collection of historical electrical apparatus, in order to show the progress of the science from early times.

A WRITER in the *Occidental Medical Times* reports a case of maggots in the nasal cavities. Over two hundred were removed by injections of peroxide, kerosene oil, etc., with calomel insufflations.

AN English Board of Guardians has passed a resolution advocating the substitution of milk for alcoholic stimulants in the hospitals.

They should pass another, substituting oats for the annual corporation dinner.

IN the Sahara has been discovered an herb called by the Arabs the laughing plant. The dried seeds are powdered, and of this a small dose produces effects similar to those of nitrous oxide gas. After an hour's boisterous delirium, sleep supervenes for a like period, when the taker awakes with the recollection of happiness.

A BELGIAN physician reports that he delivered a woman of a fine boy; the mother being fifty-nine years and five months old. She had been a widow for twenty years. She nursed her child well, and weaned it on her sixtieth birthday.

CHICAGO medical students put a skeleton in a young lady's room as a joke; but the Chicago type of young lady is not afraid of anything dead or much that is living; so this specimen threw the skeleton out of the thirty-fourth story window. Now the students are out a \$50 skeleton.

A FRENCH army surgeon was living with a woman who had previously been a dentist's mistress. The dentist annoyed the surgeon by scurrilous letters, written to the colonel of the surgeon's regiment, until the latter turned on his persecutor and killed him. For this he is to answer a court-martial.

THE Camden County Medical Society met at the Haddon House, Haddonfield, N. J., last Tuesday. Reports were read by Drs. Marcy, Jarret, Davis, Walmsley, Ridge, Wills and Braymer. The meeting closed with a dinner, at which a number of "sentiments" were expressed.

A REMARKABLE case of precocity has occurred in Trenton, New Jersey. A boy six years old is said, on good authority, to weigh over one hundred pounds, to be strong and hirsute, and so well developed as to be a dangerous playmate for girls. We regret that we have been unable to obtain further particulars.

THE Mississippi Valley meeting at St. Louis does not seem to have been wholly and entirely peaceful. It is said that some of the city doctors charged that there was too much Marion Sims Medical College in theirs, and withdrew. The meeting was a great success, nevertheless.

DR. IGNATIUS DONNELLY, the "Shakespeare—Bacon," "Atlantis," and "Cæsar's Column" man, will lecture upon the "Authorship of the Shakespeare Plays," on Monday evening, at the Academy of Music, for the benefit of St. Agnes' Hospital. If Dr. Donnelly talks as well as he writes, his lecture will be well worth hearing.

IN the *Chicago Tribune* Mr. Charles Marchand states that he entered a prominent pharmacy in that city and called for Marchand's peroxide of hydrogen. He was furnished a bottle of the commercial article, used only in the arts, but with Marchand's name written on the label.

This may be business, but it is the sort of business that is compelling physicians to dispense their own drugs.

CHICAGO Scotchmen have announced their intention to commemorate their immortal poet by building the Burns free hospital. Concerning this project the *Chicago News* says: Chicago has many hospitals, but none too many. There is room for a hospital that will never turn an emergency case away from its doors, however poor and friendless the patient. There cannot be too many hospitals in which broad humanitarianism and practical charity shall outweigh the red tape of management. Chicago's hospitals have not kept pace with the city's unparalleled strides toward metropolitan conditions. There are noble institutions among them and all are doing good work, but the time will come when the destitute stranger may receive free hospital treatment in Chicago without being branded as a pauper.

ELECTRICITY is to be the motive force in Jackson Park during the construction of the buildings. The electric plant has been completed and steam engines must go. This is done in order to reduce the fire risk. The saw mills, used in getting out building material, which have been run by steam, are now supplied by electric power, furnished, if desired, night and day. Electrical Engineer Sargeant is prepared with a sixty horse-power plant to supply electric-motor service. In a few days, three hundred horse-power will be available.

THE death, under mysterious circumstances, of Dr. Bergeron, a well-known Parisian physician, occurred a few days ago. He was sitting at a *café* with a friend and a lady with whom the doctor lived. The friend complained of a sore throat. "Let me give you some aconite," said the doctor, "nothing like that for sore throat." He then sent the waiter for a bottle of the drug from a neighboring chemist, mixed a small dose for his friend, and then poured about half the bottle into his glass, which he forthwith tossed off, telling his mistress, who tried to dissuade him, that it could do him no harm. A few hours later both he and his friend became very ill. The latter soon recovered, but the doctor died.

WEEKLY Report of Interments in Philadelphia, from October 31 to November 7, 1891:

CAUSES OF DEATH.			CAUSES OF DEATH.		
	Adults.	Minors.		Adults.	Minors.
Anæmia	1	1	Inanition	1	11
Aneurism of the aorta	2		Inflammation bladder	4	4
Alcoholism	1		" brain	3	7
Apoplexy	9		" bronchi	5	1
Asphyxia	2	1	" kidneys	1	1
Asthma	2		" larynx	1	1
Bright's disease	11	2	" liver	15	9
Burns and scalds	2		" lungs	1	1
Cancer	12	2	" peritoneum	7	1
Casualties	6	1	" pro. gland	1	1
Congestion of the brain	2		" s. & bowels	1	1
" lungs	1		" tonsils	1	1
Caries of tibia	1		Leucocythemia	1	14
Cholera infantum	3		Marasmus	1	1
Cirrhosis of the liver	1		Measles	2	1
Consumption of the lungs	55	7	Neuralgia of the heart	1	2
" bowels	1		Obstruction of the bowels	1	1
Convulsions	17		Old age	14	8
Croup	22		Paralysis	1	1
Cyanosis	5		Poisoning, arsenic	1	1
Debility	2		Pyæmia	1	2
Diabetes	2		Rheumatism	1	1
Diarrhœa	1	2	Stenosis of trachea	2	1
Diphtheria	41		Septicæmia	2	1
Disease of the heart	21	4	Softening of the brain	1	1
" liver	2		Suicide, hanging	1	2
Dropsy	2		Teething	1	1
Dysentery	2	3	Tetanus	3	1
Embolism, cerebral	2		Tumor, abdominal	1	1
Erysipelas	1		" of brain	1	1
Fatty degeneration of the heart	2		" uterus	1	1
Fever, scarlet	7		Ulceration of the stomach	4	1
" typhoid	3	1	Uremia	1	1
Hemorrhage	2		Whooping cough	1	1
Hernia	1		Total	224	186

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The Times and Register.

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Original Articles.

THE TREATMENT OF SOME FORMS OF SEXUAL DEBILITY BY ELECTRICITY.¹

By M. J. GRIER, M.D.,
PHILADELPHIA.

OF the incidental inquiries presented to the physician—particularly if he is engaged in special work—many of them will refer to the derangements of the sexual functions. Few patients, however, present themselves for consultation and treatment of these ailments, although ultimately it will appear to have been the real intention. They usually seek relief from a neuralgia, pain in the back, muscular debility, or some other cause leading easily and naturally from the ostensible to the real object of the visit. This is generally the case with the younger subjects, who have become conscious of an appreciable physical failure, or who from the presence of some slight subjective symptoms are apprehensive that such failure will certainly occur. Another class will seek relief from conditions fully developed, and at once are freely communicative as to their condition and the causes. Both classes have generally acquired morbid ideas, as well as erroneous opinions, concerning their condition, and add this much to the difficulty of their management. Some of them have already been under treatment; the family physician has been consulted, and iron, strychnine and electricity have been continuously administered, but without the desired result.

My purpose is to consider some of the conditions most usually presented, and what may be done for them by electricity.

The larger number of such cases present a state of local and general debility resulting from excessive and long-continued stimulation of special nerve endings, with consequent exhaustion of the spinal and cerebral centers controlling the parts involved.

The neurasthenic condition of the patient will probably and justly demand our earliest attention. Whether it be the cause or effect of the sexual debility the progress and results of the local treatments will be much more decided as this state disappears. In one class—and, I think, a large one—it will be found to be a lowered functional activity of the entire nervous system, depending on preceding mental depression, caused by the gradually-developing consciousness of the diminution of the virile power and the fear of its complete abolition. In another class, of more mature years, we will find varying degrees of inability, ranging from actual impairment of function to complete loss of power.

In addition to the value of properly-directed medication, aided materially by the change in the morale of the patient, as we succeed in inspiring him with a hope of relief by demonstrating to him its possibility through the results of treatment, we shall find electricity a potent factor in his restoration. Without attempting in this phase of neurasthenia to differentiate the form as to its special character, beyond the recognition of the sexual disturbances, we may proceed to its relief at once by the employment of galvanism in the treatment of the head and spine. Cerebral galvanization, with its catalytic and alterative effects, will, perhaps, best meet the indications. The method may be varied to suit each particular case; but, as a rule, the effort will be to bring the cerebral and spinal centers under its special influence by either increasing or diminishing their irritability. In the application to the head the vertex is well moistened and a two-inch electrode placed on it and

¹ Read at the meeting of the American Electro-Therapeutic Association.

firmly maintained. The vertex is selected because the current is well borne at that point; there is less vertigo or other apparent cerebral disturbance. To diminish cerebral irritability, I use the positive pole on the head, as I am convinced, from observation, the effect is more sedative. The negative electrode is a slightly convex button of two inches diameter. For plate electrodes, I prefer pure tin plates, about No. 28 gauge, as they are soft and are easily moulded to any curved surface, and are always bright and fresh looking. These are covered with ordinary white, undressed muslin, such as cotton shirting. I have used such a covering for over twenty years, and prefer it, because it is thrown in the waste basket after one application; hence the electrodes are always freshly covered, and the care and risk attending the use of sponges and chamois skin are avoided. Perhaps equally important is the greater uniformity in the relation of the electrode to the skin as to distance; it never varies one-hundredth of an inch, keeping the current density quite regular; while with the sponges the ever-varying distance and pressure may be quite enough to convert an intended stable to a labile application. Having adjusted the positive plate to the vertex, the negative is placed subaurally on either side; beginning with a minimum amount of current—say about two m. amperes—and a uniform pressure, the negative electrode is slowly moved down over the region of the cervical sympathetic nerves, until we reach the first dorsal vertebra, when we may gradually raise the current strength to five m. amperes, and pass slowly down each side of the upper spine. This current strength should be maintained, as the increased resistance of more tissue is brought into the circuit. As a rule, we need not pass below the dorsal vertebra, depending on the catelectrotonic state induced below that point, and reserving the special lumbar and sacral centers for subsequent treatment.

Carefully avoiding any abrupt change of application and pressure, the positive may now be placed over the inferior cervical ganglion on either side, and the negative traced over the course of each dorsal nerve, thus influencing gently the sympathetic ganglia. What this influence is, or how it acts beyond the so-called catalytic change, we do not know. The effect of an interrupted galvanic current on the nerves and muscles has been fully established as laid down by the laws of Pflüger, giving us normal actions of contraction on opening and closing the circuit. It is probable in a labile application of the current, as above, the movement of the cathode over the tissues is equivalent to an opening and closing of the circuit, as each cell is successively subjected to its presence, and thus there is induced a momentary contraction or tonic state of the vascular muscles, resulting in the improvement of circulation and nutrition. Landois quotes Grützner as saying that, "The constant current has no effect in vaso-motor and secretory fibers;" per contra, Erb says: "Of special importance is the demonstration of the vaso-motor effects of the electrical currents. The recent experimental researches of Löwenfeld, with regard to dilatation and contraction of the cerebral vessels upon transverse and antero-posterior passage of the galvanic current through the head, are valuable in this respect. Perhaps, also, the electrical actions upon trophic nerve-tissues may produce changes in the dissimulation of other tissues and organs of the body, organic metamorphoses, modifications of nutrition, which constitute a part of the 'catalytic' effects."

The general result of the treatment, after a number of applications, is apparent in the disappearance of the sallowness of nervous depression, and a better cutaneous circulation, as shown by the improvement in the complexion; a more refreshing sleep, and less disposition to lag on rising; there is also an improvement in the digestive functions, and a general feeling of buoyancy. This gives us a much better foundation on which to build our efforts in the treatment of the local disturbances.

The loss of the erectile power is the most prominent of the local symptoms, and is that which naturally impresses the patient most forcibly, and impels him more than any other to seek professional aid; to him it is but a single fact; to his physician it is the evidence of the derangement of a complicated system of parts and functions, both local and general.

A brief statement of the mechanism of erection will aid us in the analysis of the symptoms and causes of failure, and, to a large extent, point out the indications for treatment. Erection depends upon the turgescence of the spongy bodies of the penis, and will be more or less complete according to the amount of blood passing into and retained there by the normal action of the mechanism, which retards its outflow. This will result from physical and psychical reflexes acting through the appropriate muscles. The trabeculae of the cavernous bodies consist mainly of elastic fibers and erectile tissue, which are actuated to dilatation by the *nervi erigentes* under the domination of cerebral or reflex impulses; the consequent dilatation of these spaces permits an augmented supply of blood causing an enlargement of the organ, with an elevated temperature. Certain muscles during this period are brought into action, and by their compression retard the outward flow of blood, thus increasing both the volume and the density of the organ. In co-ordination of these parts the failure of one or more gives rise to some of the forms of impotence; these may be broadly classed under two heads, the nervous and the physical. In the former we may have a physically perfect apparatus, capable of functional activity at times, but failing at others, which will depend on disturbed or perverted innervation, originating in the cerebral cortex, or in the center of the spine and medulla. Fright, certain emotional disturbances and personal feeling may act in this way; but these we need not dwell upon, as they may occur in the best of health. We will study the morbid conditions, which will be found to arise mainly from the irritation or sedation of centers caused by overstimulation, and will consider more in detail the physiology of the mechanism of erection, as far as it may aid us in explanation of the various forms of debility. The active dilatation of the cavities of the corpora is effected through the influence of the *nervi erigentes*, described by Eckhard. They are formed by small branches from the second and third sacral nerves, and contain vaso-dilator fibers, which actively expand the deep arteries and enlarge the cavities of the erectile tissue. A center for these nerves has not been definitely proved to exist in the medulla; it is only surmised, but its existence seems to be fully justified; its action is opposite to that of the vaso-motor centers. In speaking of the probable existence of the vaso-dilator nerves Landois says, "If the *nervi erigentes* be divided there is no effect on the blood-vessels of the penis; but if their peripheral ends be stimulated with electricity the sinuses of the corpora cavernosa dilate, become filled with blood, and erection takes place."

These reflexes may be excited by physical excitation of the sensory cutaneous filaments; by volitional contraction of the genital muscles, and by the psychical activities of the cerebrum. If the activity of these centers be thus induced, the first result is that of excessive dilatation of the arteries, and engorgement of the cavities of the corpora, and the first stage of erection is produced; to maintain it the out-flow of blood must be retarded by the constricting action of the appropriate muscles. Failure of these centers to respond means absence of dilatation and its attendant engorgement, and the resulting inactivity of the retarding muscles, producing a not infrequent form of nervous impotence clearly referable, directly, to the functional inactivity of the *nervi erigentes*.

These cases I have found associated long-continued continence, and in men of excessive mental application in whom the outgo of cerebral activity has been expended in other directions; also, in those who have become sexually morbid, having lost through exhaustion the normal psychical reflexes; usually they retain more or less of the physical reflexes and respond to stimulation of the local sensory nerves, thus proving that the spinal paths of the afferent nerves have not been impaired, or at least not to a very great extent.

In such cases the indications are to stimulate the *nervi erigentes*, and the upper centers acting in conjunction with them. An ascending current of about 5 milliamperes of galvanism may be passed from the perineum, from over the third and fourth sacral nerves, where the vaso-dilator branches arise, and from the genito-spinal center of Budge, at the fourth lumbar vertebra, successively; the negative electrode should be carefully applied to the back and sides of the neck and to the vertex, endeavoring to increase the excitability of the cortex in those in whom it has depressed, and to quicken the responses of the lower spinal centers to their impress.

Eckhard observed erection to take place after stimulation of the higher regions of the spinal cord, as well as of the pons and crura cerebri.

We have another important set of nerves to consider in the vaso-motors. Their function is to maintain a normal tone or contraction of the blood-vessels and antagonizes the action of the vaso-dilators.

Their general center lies in the medulla oblongata; stimulation of this center contracts the arteries and its paralysis causes relaxation and dilatation of them. In the afferent nerves there are fibers whose stimulation affects this center; some exciting and others depressing it. The primary stimulation of these nerves is attended by contraction of vessels, and overstimulation by dilatation of them; there are also local centers in the spinal cord, each controlling certain areas. Under ordinary conditions the vaso motor nerves are in a state of moderate tonic excitement. If from irritation of these centers we have the vaso-motors over-excited, and a controlling influence exercised on the vessels supplying the erectile tissues, through their dominant control over the vaso-dilators, the engorgement of the sinuses of the cavernous bodies will be prevented and erection will be impossible. This happens in the earlier changes following excessive sexual stimulation, and is most probably the result of the irritation which precedes exhaustion of the centers. The excessive tone is shown in the diminished blood supply to, and the lowered temperature of, the pale and shrunken organ. In healthy but nervously excitable individuals under certain circumstances, emotional influences such as fright or fear may act in a similar manner, by producing a

sudden temporary excitement of the vaso-motor nerves, to a degree sufficient to overcome the previously active vaso-motor dilators, and by thus cutting off from the cavernous sinuses and the retarding muscles the necessary blood supply, produce a sudden collapse with entire disappearance of the erection. In chronic hyperaction of these nerves, the lessened blood supply to the secretory organs is shown by the diminished amount of their secretions, and the consequent loss of this source of stimulation. In such cases, galvanism as described in the application to the vertex and upper spine for neurasthenia will diminish the upper central irritability; and good results will come from a stable application to the lumbar region with a current of 5 or 6 milliamperes through a positive 4x4 inch plate, one of equal size being placed at some indifferent point on the lower portion of the thigh. The extra current acts remarkably in many cases, and probably in the same manner as the continuous, temporarily lowering the activity of the constricting nerves.

I find the best results are produced by placing a moistened electrode, about one and a quarter inches square, against the perineum; this should be the positive pole; the negative may be a plate of three inches, held continuously against the sacro-lumbar junction, the cords should be connected with the terminals of the primary coil. Commence with the minimum strength and gradually increase it to as much as the patient can comfortably bear; the application will require from ten to fifteen minutes duration; the result varies with the patient's general and local condition; in some cases, usually those who are less nervous and irritable, the effects are noticed at the time of the application, others may not notice a change for half an hour or longer after the treatment. In those in whom the sensory nerves are not very much impaired the first impression may be a sense of tingling along the dorsal nerve of the penis, or it may be distributed over the inner surfaces of the thighs, through branches of the internal cutaneous nerves, often reaching to the knees. In a little time a warm glowing sensation will be felt mostly in the sacro-lumbar and gluteal regions; this being obtained, the application should cease; this effect may last from a few minutes to several hours, and will be alluded to by the patient at a subsequent visit as causing a feeling of comfort and pleasure. The ultimate result is a restoration of the normal circulation, and an improvement in the nutrition of the parts, with increased local muscular power. In speaking of this particular application, I might add that occasionally a patient has reached the office at a moment when the cold stage of an intermittent fever was beginning. Without making any allusion to the expected effect, I have made this application, and have often succeeded in breaking up the paroxysm or materially lessening the usual duration of the chill; on several occasions the fever did not follow, although, in the subsequent return, two days later, the usual sequence was observed. It did not require any more time or energy of current action in these cases, judging by the disappearance of the chill and the restoration of color to the nails and lips, than is needed to get the pelvic effects in the other cases.

The opposite condition of vaso motor relaxation is frequently met with; it is an exhaustion following the state of irritability just described. It is a loss of that moderate tonic excitement, which is the normal state of these nerves, on which a healthy circulation and nutrition depend. When affecting the centers controlling the genital organs the result will be a

passive engorgement, with a flaccid elongation; the temperature may be normal or lowered, depending on the sluggishness of circulation; the muscles are undernourished, and voluntary control of them is lessened; in many cases the secretion of the coronal glands is unpleasantly augmented. In the erectile effort the vaso dilators may be sufficiently active to enlarge the cavernous sinuses and increase the flow of blood thereto; but the weakened muscles fail to sufficiently retard the return of blood from them, and the result is a moderate increase of bulk, with a soft gland and an easily compressible body. The value of electricity is suggested by Claude Bernard's well-known experiment, where section of the cervical sympathetic nerve is followed by dilatation of the blood-vessels it supplies; and stimulation of the peripheral end causes the opposite condition of contracted vessels. As we cannot influence the nerves by direct contact, we will have to depend upon the application of galvanism to those parts which anatomy and experience teach us is the most available, and through which we can get reflex effects. A very efficient method will be the introduction within the urethra of an uninsulated metallic sound connected with the negative pole; the current of galvanism should not be over 2 or 3 milliamperes, and should be slowly broken, say about twice each second, for not over two minutes; the contact should last only during the instant of making, giving a short interval of excitation and a longer one of rest, thus securing the benefit of the reflexes, caused by the stimulation of this pole, without the risk of the increased exhaustion, which would constantly follow a stronger treatment. The improvement of repeated applications will be shown by the retraction of the organ to a normal size. The immediate effect of the application is due both to muscular stimulation and increased arterial contraction; but mostly to the latter, as the contraction is often to an extent beyond the capability of ordinary muscular action, the diminution being sometimes so great as to reduce the organ to half the size of healthful repose.

Two other methods may be employed to produce this stimulation. Galvanism applied to the surface of the inner side of the upper third of each thigh, with a bare negative electrode, kept slowly moving, and using a current strength only sufficient to develop a pungent irritation of the sensory nerves; to use more would be to overtax and exhaust the vasomotor nerves still further, and we would fail to get the desired reflex effects on the higher centers.

The bare negative electrode of the induction coil may also be used over the same region, and for the same purpose. The vibrations should be slow enough to give perceptibly distinct shocks.

This latter treatment is in accord with the statement made by Kronecker and Nicolaidès, quoted by Landois in speaking of the stimulation of the vasomotor nerves, that the maximum contraction of the arteries, as expressed by the blood pressure, is reached when ten to twelve strong, or twenty to twenty-five moderately strong, shocks per second are applied. In O. Naumann's experiments on the circulation of the frog, he found that weak electrical stimulation of the skin caused, at first, contraction of the blood-vessels, with simultaneous excitement of the cardiac activity; strong stimuli, however, had an opposite, or depressor, effect.

The positive pole in these therapeutic applications may be placed at any indifferent part, since the effect desired is the reflex action produced by the irritation of the negative pole.

In considering the mechanism of erection, reference has been made to the necessity of a restraining power, whereby the blood injected into the sinuses may be retained there. This is accomplished by the action of certain muscles, which are also concerned in the emission of the semen and urine. They receive their motor influences from the muscular branches of the pudic nerve. The bulbo-cavernosus or accelerator urinæ muscle acts on the bulb of the corpus spongiosum, and is thus concerned in the hardening of the urethral portion; the middle fibers are supposed by Krause to assist in the erection of this corpus, by compressing the erectile tissue of the bulb; the anterior fibers are longer, and spread over the sides of the corpora cavernosa, as they rise to be inserted into the tendinous expansion covering the dorsal vein of the penis. According to Tyrrel, the contraction of this portion assists in erection by compressing the dorsal vein, thus retarding the outflow of blood. This effect is materially aided by the action of the deep transversus perinæi muscle, which is perforated by the deep veins of the penis, and which are compressed between the terse horizontal fibers of the muscle when it is in action. The erector penis muscles also contribute efficiently to this retardation, as in contraction they compress each crus penis.

Dilatation and turgescence of the sinus of the corpora having occurred, we can readily see how a partial or complete failure of these muscles to act will impair or prevent erection. Under certain psychical impressions their failure will aid in producing the erectile collapse we have alluded to when the vasomotor nerves dominate the vaso-dilators. In their sexual activity these muscles, while partly under volitional control, are mainly excited by reflexes; and very readily in health become equally active under the reflexes resulting from stimulation of the sensory nerves of the penis and adjacent parts. These muscles respond more or less to the faradic and galvanic currents, according to their degree of health or exhaustion, and tests thus made may assist us in the diagnosis of their condition. A suitable electrode, insulated where it comes in contact with the anal margin, may be introduced in the rectum and pressed against the anterior wall; a small, flat electrode, connected with the negative pole of the extra current, should be placed against the perineum, and the current gradually increased in strength until the muscular action is produced, which, in health, is quite strong. If the muscles fail, or respond feebly the galvanic current may be substituted, observing the same polarity, making slow interruptions, with a feeble current, gradually increasing both the strength and rapidity of interruption. This proceeding answers very well for the direct treatment of these muscles. Decided contractions of the accelerator and compressor urethral muscles may be obtained by substituting for the perineal electrode an uninsulated metallic urethral sound, using an interrupted galvanic current. I have often seen the sound extruded by the contractions induced, and in other cases there has been a spasm, lasting two or three minutes, grasping the sound so tightly that it could only have been withdrawn by more than a prudent and safe effort.

These muscles being supplied by the muscular branches of the pudic nerve, indirect stimulation of them may be made by placing a positive plate electrode over the sacrum, the rectal electrode becoming the negative and remaining as before, using, if the muscles are very feeble, a short, constant current of not over two m. amperes, supplemented by twenty or

thirty interruptions, occupying about one minute. A weak muscle of this class requires a longer duration of current action and short intervals of rest, if the current be of not more than the above strength. Vigorous treatment only seems to exhaust the already enfeebled parts. The rectal electrode may now be changed for a small perineal plate, and stimulation of the perineum and root of the penis may be made with a bearable strength of the extra current, slowly interrupted. This will produce both muscular and reflex effects.

Conjoined with defective muscular action, there is usually a lowered sensibility of the genital, cutaneous and special sensory nerves, caused by the exhaustion following excessive stimulation. This will be found most marked about the prepuce and the glands, more particularly around the corona and the papillæ beneath the meatus; also, if the anæsthesia be profound, in the frœnum præputialis. The cremaster reflex is sometimes diminished and may be abolished. Such cases may have a decided cerebral sexual activity with physical failure; or there may be a moderate erectile power, with loss of sexual pleasure and a retarded or incomplete orgasm. Sensibility of the surfaces may be quite decided under electric tests, and the tactile sensibility much enfeebled or lost, lessening the value of electro-diagnosis, excepting as to the condition of the muscles. As the local nutrition is usually impaired, resulting in relaxation of tissue and lowered temperature, we will meet both indications by the use of the galvanic current applied to the sensory parts most affected, by means of a small, bare electrode, placing a medium positive plate over the sacrum, to include the origin of the pudic nerve, from which is given off the dorsal nerve of the penis. This is a sensory, and hence an afferent, nerve, and, it will be noted, the direction of the current is in opposition to its normal nerve-current direction, so that while the current is passing downwards—that is, from the center to the periphery—it has, in relation to the normal nerve direction, an inverse course. My experience is, that in treating the lowered sensibility of such nerves the best results are obtained from a very mild current in this manner, and continued only long enough to produce the blush and a slight pungent sensation at the negative pole.

In the earlier changes of nerve excitability we often find an extremely sensitive condition—a hyperæsthesia, in which even contact of the ordinary clothing with the surfaces will suffice to produce erotic excitement. Preputial and rectal irritation, as well as other local causes, may also originate it, and, in many cases, leads to direct stimulation of the genitals by touch, which, continued to excess, is a potent factor in producing abnormal excitability, and consequent exhaustion of these nerve centers. It is also a frequent cause of premature emission. Having removed or corrected the exciting local causes, galvanism will aid us in removing the central irritability. We may use the sedative action of the anode, applied over the sacrum, using a stabile current of not over five m. amperes; the negative should be placed over some indifferent point, preferably to the lower limbs. It is essential to have a very mild current, free from any variation of strength, and to maintain the sacral pole evenly at one position and for a longer time than has been advised in other applications.

Having thus treated the centers, we may diminish the excitability of the nerve terminals by enveloping the penis with a soft metallic plate, thinly lined with moist absorbent cotton, to fill up irregularities and make more uniform contact. This plate should be

the anode, and the cathode may rest on the abdomen. A mild, steady current through a sensory nerve for ten or fifteen minutes, traversing it in the normal nerve current direction, will lower the excitability of the nerve. Urethral irritability is a most frequent cause of morbid action of the genital centers, and gives rise to various degrees of nerve irritation or sedation. Premature and painful emission may also be traced to congestion and irritation of the verumontanum.

Similar impaired functional activities may result from the reflexes induced by continued irritability of the urethral lining and its ducts. An anodic bare metallic sound, with a current of not more than one m. ampere, and a cathodic plate over the lumbar vertebrae, will diminish the excessive irritability of this membrane.

Many other points might be considered, but the general method of treatment and the reasons therefor are here outlined, and, I trust, may be of such service to others as I have found them.

1531 SPRUCE STREET.

GALVANISM IN THE TREATMENT OF CORNEAL OPACITIES.¹

By L. A. W. ALLEMAN, A.M., M.D.

THE employment of the electric current in the treatment of diseases of the eye is no new expedient; yet our knowledge of the manner in which this agent accomplishes its object,—of the indications for its employment, and of the results which may be reasonably expected, is much short of that full and accurate comprehension so much to be desired in the employment of any therapeutic agent.

Much has been written upon the subject, but unfortunately, little of this literature is available as a sure foundation upon which to build. The greater part of it is mainly suggestive. Cases are frequently reported, simply stating that "electricity was employed with apparent benefit," with absolutely no reference to the most important details of method, etc., or again a report may state that "ten cells were employed, daily, for a given time, yet no good results were noted." Now, we all know that the same ten cells may one day give us a very effective current, and the next, for some reason not always easy to discover, no current at all; and unless we have some definite statement of the amount of current the patient actually received, we are unable to tell whether the failure was due to the fact that the treatment was inefficacious or to no treatment having been given, through some defect of the apparatus employed. Yet sufficient evidence is at hand to convince us that ophthalmic surgery presents a very favorable field to this method of treatment, and to stimulate us to investigation and experiment.

I have endeavored to test thoroughly the efficiency of galvanism, in one class of cases, *i. e.*, opacities of the cornea; and I will invite your attention to a report of my investigations.

After the subsidence of the corneal inflammation which has given rise to the opacity, the eye usually remains for some time in an irritable condition; it flushes easily, and shows evidence of a high vascularity, an increase of nutritive activity in the neighborhood of the scar. Sometimes vessels are seen running on to the cloudy area; and when this is the case, the prognosis is relatively more favorable.

¹ Read before the American Electro-therapeutic Society at Philadelphia.

For some little time the reparative process may go on with much activity—especially in young subjects; the cloud diminishes in density and extent, but more or less quickly it returns to a condition of normal nutrition; the scar tissue becomes more resistant, and the clearing up proceeds more and more slowly, till it finally ceases. In this stage we can often accomplish much by treatment. Such agents as an ointment of the yellow oxide of mercury; calomel dusted into the eye; massage and the like, prolong the reparative process. Sometimes such a radical disturbance, as a corneal incision made in performing an iridectomy will favorably influence a case which has for a long time showed no improvement. But we finally arrive at a stage where the eye is perfectly quiet, and no further absorption of the opaque tissue can be induced.

It occurred to me that in this stage the galvanic current was indicated.

It was a well-known and established fact that it would act as a powerful modifier of nutrition in other parts of the body. Why could it not be made to do the same thing in the cornea?

I believe the reason it has not been more successful was that when used through the closed lids, the necessarily feeble current employed on the eye could not produce at the site of the lesion sufficient stimulation to bring about the desired effect, and to meet this indication I had an electrode¹ constructed which I could use upon the surface of the cornea. It consists of a silver bar, *a*, 12 mm. in length, insulated, except at the ends, by a hard-rubber shell; the exposed surface at the lower extremity is slightly concave, 7 mm. in diameter. The upper extremity carries a thread which screws into a metal collar at *b*, allowing the tips to be changed when necessary. The collar is attached to a copper spring, *c*, which still further protects the cornea from injury when the electrode is moved in the fingers, and at the same time, being perfectly flexible, allows the tip to be adjusted to any desirable angle, which greatly assists the convenience of application. The spring is fastened to a hard-rubber handle, *d*, 10 cm. in length and 1 cm. in diameter, through which a conducting wire carried to the binding post, *e*, at the upper extremity.

In my first experiments, it was my practice to dip the exposed silver tip of the electrode into a bath of metallic mercury, thereby attaching a globule of mercury to the electrode, which would act as a cushion upon the surface of the cornea; but I have now abandoned this expedient as unnecessary, sufficient moisture being always present and forming rather a better cushion than the mercury.

A battery of Lechanché cells, a Flemming milliamperemeter, and a rheostat complete my outfit. The rheostat is a modification of one made by Mr. Barrett, and consists of a pledget of cotton impregnated with powdered graphite, between two metal discs, which can be approximated by turning the thumb-screw at the top, which increases the density of the cotton, and thus diminishes its resistance. I have found this rheostat extremely sensitive, and altogether satisfactory.

I use for an electrode upon the cheek a carbon disc with a short metal handle, which fits into a hard-rubber shell. The disc is covered with moist absorbent cotton, which is held in place by the shell, and is renewed each time the instrument is used. The

advantage in cleanliness on a sponge electrode is apparent. I have this electrode made with a very short handle, to be less in the way of the operator, when held by the patient upon the cheek. I prefer to place this electrode upon the cheek, on the same side as the eye to be treated, to make the current as superficial as possible, and to bring, as little as may be, the eye and intracranial structures into the circuit.

I apply the cathode to the cornea, as theoretically indicated, to produce disintegration of the scar tissue, but in practice have observed little difference between the action of the two poles.

Before placing the electrode upon the eye, I direct the patient to touch it to the tip of his tongue, as this gives about the same resistance as through the cornea, and adjust my rheostat until I obtain the current I desire to use. This seems a necessary precaution, as the cocaineized cornea might be seriously damaged, without any sensation of pain giving warning should the needle fail to work properly, and too strong a current be accidentally employed.

The eye being previously well cocaineized, I stand behind the patient, whose head is thrown back in an operating chair, and holding the lids well apart with the thumb and first finger of the left hand, bring the electrode in gentle contact with the cornea. It is quite essential that the lids shall be held well away from the electrode, for even when well anesthetized, the current produces much more pain when passing through the lid margin than through the cornea.

As a rule, the applications are of three minutes' duration. Individual cases will be found to vary greatly in their tolerance of the current. I usually begin with $\frac{1}{2}$ milliamperes from one to two minutes, and gradually increase the strength of the current and length of the sitting till 1 to $1\frac{1}{2}$ m.a. for three minutes is reached, if the current is well borne.

I have used as strong a current as 3 m.a., but the stronger current seems to be no more efficacious, and is very apt to be followed by annoying irritation.

It is desirable to produce with each application just sufficient stimulation to give rise to an increased nutritive activity, and not to overstep the line and produce destruction of tissue, paralysis of function and stasis. The condition of a recent scar is reproduced, the conjunctiva becomes injected up to the corneal margin, and fine vessels are seen during the treatment moving on to the scar. This disturbance subsides by the second day, when the treatment is repeated. If the eye becomes irritable the applications have to be suspended for a time.

The results of this method of treatment are satisfactory in the extreme. The duration of the opacity seems to make little difference in the prognosis. Occasionally an eye is met with which, for no apparent reason, does not bear the current well, and the very mildest treatment is followed by a severe reaction; such cases are rare, however; in the majority of cases the reaction is slight, and the improvement very marked. The visual results obtained will depend largely upon the position of the cloud. When concentric with the pupil little improvement is seen till late in the treatment; but when the pupil is covered by the edge of the opacity the visual improvement is very marked at the outset; this is due to the fact that the scar always clears up from the periphery towards the more dense center. When the scar vascularizes easily the prognosis is most favorable, however old or dense the opacity may be.

In the small very white scars, sometimes seen in adherent leucomata, it takes a very long time to influence the center of the opacity, and the patient,

¹ I wish to acknowledge my indebtedness to my friend, Mr. W. E. Gibbs, M. E., for his kindly assistance in designing this electrode, and arranging other electrical appliances.

who is elated by the marked visual improvement obtained by the first few treatments, becomes discouraged with the much slower progress of the central opacity, and is very likely to abandon treatment; but in such cases as have persevered for some time there has been a slow but steady improvement, even in the dense white scars.

I will not trespass upon your time by a series of case reports, but will cite a typical case from a series personally reported.

CASE.—Patient M. F. presented himself at my clinic at the Lying-In Charity Hospital Dispensary May 14, 1889, giving the following history:

Twenty-seven years previously he had lost the left eye from an injury. Two months ago right eye became inflamed and painful. He had evidently suffered at that time from a severe keratitis, which had left a leucoma covering nearly the entire papillary area. Vision $\frac{6}{200}$; not improved by glasses. He was given 1 m.a. for one minute at the beginning, and the time was gradually increased up to three minutes. On June 8, after eight treatments, vision had improved up to $\frac{16}{200}$. After seven more applications, the current being somewhat increased—2 m.a. for two minutes having been given, vision rose to $\frac{20}{200}$. The eye, which had been somewhat irritable, now became quite severely inflamed, and treatment had to be suspended for some time. The eye had become quiet by August 5, when vision had improved to $\frac{20}{100}$, and by August 27 vision $\frac{20}{40}$ was obtained. Wishing to determine whether or not the treatment was entirely responsible for the improvement, I suspended treatment from this time till October 20, when I found vision $\frac{20}{40}$ as before. Treatment was not again undertaken till February. After six more applications vision $\frac{20}{40}$ was obtained on March 7, and after eleven more applications, vision $\frac{20}{40}$. The patient received in all thirty-four applications, average about $1\frac{1}{2}$ m.a. for three minutes, and vision was improved while under treatment from $\frac{6}{200}$ to $\frac{20}{40}$.

I have found much difficulty in pursuing these investigations to arise from the fact that most of the cases treated were hospital patients of a class to whom visual improvement, beyond that necessary for unskilled labor, was of no great moment, and after this was obtained, it was difficult to induce them to continue treatment. Many cases, therefore, had to be undertaken in order to obtain even a few which were satisfactory test cases.

Since the publication of my first series of cases I have been obliged to limit myself to a few selected cases, and have chosen some of the severer types for experiment. Unfortunately these cases cannot be reported, but I feel much encouraged by the progress they are making.

The establishment of an Electro-Therapeutic Clinic at the Brooklyn Eye and Ear Hospital has enabled me to put a large number of patients under treatment, and, although sufficient time has not yet elapsed to allow me to make any showing of results, the progress of the cases is sufficiently favorable to persuade me that I have not over estimated the value of galvanism in the treatment of corneal opacities.

BROOKLYN, N. Y.

HAIG states that, other things being equal, arterial tension varies directly with the amount of uric acid in the blood; and that opium, mercury, etc., affect tension by their action on uric acid. Opium clears the blood temporarily, by storing the uric acid in the tissues; with the return of this to the blood comes the "opium rebound," with all the signs of excess of uric acid.—*Lancet*.

MEDICAMENTAL ELECTROLYSIS.¹

By DR. FOVEAU DE COURMELLES,
PARIS.

Laureate of the Academy of Medicine; Licencié des Sciences Physiques; Licencié des Sciences Naturelles; Licencié of Laws.

GALVANI, called at his time dancing-master for frogs, found the greatest curative agent and mechanical power known to-day. It was perhaps by chance (if such can be said of an invention) that Galvani, having suspended, by a copper wire, some skinned frogs to an iron balcony, saw their limbs moving each time that the frogs, swung by the wind, touched the iron. There was the revelation—it needed for the production of this force two metals and a liquid.

But one is not with impunity an innovator and inventor in this world. The happy Galvani, who should have left his name to Galvanism, was treated with contempt. He had a successful rival—Volta, from the University of Pavia—who succeeded not in confusing him, but gained also his place in the front row of electric science. Of the pretended vital force of the former, Volta made the electric fluid, the pile that bears his name, and the Voltaism.

Before the learned Italians of the end of the eighteenth century, there was only the electrical statics known, the one by rubbing a sulphur bowl between the fingers, like the thunderbolt by de Romas, the Abbot Nolles, and Franklin. Thanks to their successors, electricity was known no longer in repose, but in activity. They sought and found laws for its displacement, the rules that governed the phenomena which followed, and their usefulness, both industrial and medical.

One of the most simple applications, of electricity to the art of curing, is the application on the skin, slightly moistened, of two metals—copper and zinc, for example. If the contact is sufficiently prolonged, one obtains burns (real scabs, that is to say) with destruction of the tissues. It is, so to speak, a double-action electrical and metallo-therapeutical. We are all impressionable to some metal, which must be found—gold, copper, silver, lead—and which may recover the annihilated sensibility of certain nervous subjects. (Burg.) By way of retaliation, there exist some metals that are distractive to the organism, even by the simple application on the skin. With much more reason this noxiousness is increased if the metal employed brings forth an electric current: otherwise said, if it is a conductor of a rubbing machine, a pile, or a bobbin.

There is, then, a penetration of one of the conducting substances in the same way, whilst one becomes longer, the other decreases.

It is, again, a phenomenon of transport, the fabrication of diamonds made known by Berthelot; a current passes between two electrodes—one of coal, the other of copper. One discovers on the copper some very small crystals of diamond, and we may use this substance, reputed the hardest known, and solely reduced by itself. In return, the coal is covered by copper. There was then a double transport of one to the other, and *vice versa*. The electrotype gilding and silvering are facts of the same order. I instituted long since a series of experiments to apply to medicine these industrial facts. There are, in reality, a series of chemical reactions proved by characteristic colorations suddenly appearing; thus, solutions of cyanide of potassium and iron salt, separately ex-

¹ Read before the American Electro-therapeutical Association.

aminated are colorless; but if you bring together one drop of either, the blue coloration appears suddenly. I have operated with the currents of galvanic batteries (continuous currents) and the induction currents (discontinuous currents) in the following manner: A pullet's skin covered a cyanided paper, and the electrodes are applied, having been beforehand moistened by an iron solution; suddenly, through two centimeters in depth, appeared the expected coloration. These phenomena of transport and penetration by the electric currents, the electrical statics, the accumulators, explain the variations of the ordinary electric treatment for the same illness in different patients. The composition of conductors must be varied, which, up to the present, has not yet been done by any one.

There is here the basis of a real medical revolution—the electrical penetration of medicaments. This invention, imparted to the Academy of Sciences the 24th of November, 1890, and to the Academy of Medicine the day after, impassions the physicians at the present day. After my new experiments the Academy of Sciences appointed a committee, whose members were MM. Berthelot, Charcot, and the Baron Larrey. The Academy of Medicine, in consequence of my long memorial, also elected a committee, whose members were MM. A. Gautier, Yariel, and Bouchardat. Even the title of my method has since been copied in London. A lecturer in Lyons' University, Mr. Imbert de la Touche, thinking he had the priority, related to the Electrotherapeutic Society at Paris experiments of the same kind. The *Lancet* described neuralgias cured by cocaine electrically absorbed. The experiments of MM. Gautier, Newmann, Laurance, and Arthur Harries have confirmed my methods with people of science.

Edison imparted to the Congress of Berlin the fact of a gouty person with nodes being cured by dipping his hands, one in a solution of carbonate of lithium, open to the positive pole of a pile, the other in a solution of common salt, open to the negative pole.

The enthusiasm was great in France after this solitary fact, which could be only pure electrolysis, destroying the tissues by chemical action, thanks to the electrical action of continuous currents.

This dissolution of gouty nodes may have been more rapidly made by the penetration of carbonate of lithium, but would have been produced by using the electrolysis alone. This experiment must be accepted with reserve. Besides, it is not applicable to the human body; for a man thoroughly immersed in a liquid bath crossed by an electric current, is neither penetrated by the liquid of the bath, nor by the current, for the latter, which must choose two ways—one easy (the liquid's), the other hard (the man's)—takes certainly the easier. With two baths for the arms, the current passes through the body, for, having Hobson's choice, it overcomes the resistance, closing the circuit.

But, I repeat, this method is impracticable for the rest of the organism. This idea, put into practice this great while, allowed me to dissolve cysts and tumors, and without referring myself at first to the recoveries of patients, I began to ascertain if penetration produced itself without the human body. This idea being once proved true, I made it practical.

Let us examine the multiplied actions of this method generalized by me: neither baths, nor application of continuous currents alone with peculiar electrodes covered with a special substance for each case. The necessary materials, corsets, probes, trocars, cupping glasses, are made by one of our most eminent professional men, Mr. Chardin.

The use, varying according to patients, of several kinds of electricities is made in this manner. All the currents transfer the substances; some, continuous, decompose those which are composite, only carrying a part of their elements; the others, discontinuous, carry for, and such as they are, the active agents.

One distinguishes at once the pathological cases to which it would be suitable to apply one or the other of these currents. For tumors, synovial cysts, glands, wens, stone, in fact all abnormal production or local hypertrophy of the organism, there are the continuous currents complemented by medical dissolvents, the iodides, the salts of lithium, the bicarbonate of sodium. One understands evidently, that if one operated on the skin or in the natural cavities, the instrument differs in shape. On the skin a kind of cupping-glass helps the electrical penetration of the medicaments, by the porosity of the skin produced by a partial vacuum made in the instrument.

Neuralgias, rheumatisms, hepatic and renal colics, their painful symptoms disappear with the continuous currents descending, and the introduction of substances containing opium, aconitine, quinine.

The loss of feeling, muscular atrophy, are destroyed by continuous currents ascending, with strengthening agents as adjuvants, such as strychnine, phosphate of lime.

Paralysis, troubles of the nervous system, normal functions decreased or destroyed, find their master in the discontinuous currents with the introduction in the organism, thanks to them, of tonics or excitants, according to the case. Baths of static electricity with medicamental absorption, electrical descending shower baths, are precious adjuvants. This is not a panacea but a vehicle, a way of transferring medicinal substances.

It is useless to speak of the advantages of this new therapeutic method. With the same, besides the general illnesses on which the action is slow and must be completed with medicaments absorbed by the mouth, it acts principally on local manifestations.

More absorption of nauseous drugs; it is no longer necessary to take these in unequal doses, as neither the digestion or the circulation requires to be completely saturated before carrying the active agent in infinitesimal quantity to the painful part. Here electricity cures the latter—the penetration is weak but it is sufficient.

For calculi, not daring to experiment with it in the human body, I operated *in vitro*.

If a piece of chalk placed in a solution of bicarbonate of sodium is crossed by an electrical current, you see the angles become round, which indicates a destruction of the chalk. This substance being more difficult to destroy than oxalate of lime or urate of sodium, which generally form calculi, this experience permits one to expect the suppression of painful operations, such as cystotomy or lithotripsy. An application made and tried by myself on the guinea pigs is based on the following facts: blunt instruments may with impunity perforate the organs. An American had even the audacity to prick the heart with a needle in order to assure himself of death, and if the patient was not dead, far from killing him, this little operation would resuscitate him. The puncture of pleuritis is also inoffensive, and evacuates the noxious liquid.

They know also that the electrical current accompanied with chemical decompositions will kill the microbes. That also, by means of special trocars of variable dimensions with the cases, one can make pass usefully the electrical medicamental currents, that is to

say cure through the sick organs themselves, perforated for the occasion. The lungs of phthisics in the place of the cavities, which are shown by ausculting, are amendable to this treatment.

Some have often confounded lately and they confound still, my method, the *medicamental electrolysis*, double action of electricity and of a medicament, with the cataphoresis, simple action of transport.

Evidently there is a considerable difference between these two groups of phenomena, the latter being included in the medicamental and electrical actions.

In the cataphoresis you must overcome the resistance of the interposed objects, in order to let the therapeutic substance pass through them, as also it is necessary for that to have currents of considerable intensity, dangerous for the patient should there be penetration, or inoffensive without transport in consequence of insufficient intensity. In my instruments, I suppress the resistance of liquids, for a metallic wire of platinum carries the current to the contact with the painful part.

The active solution is crossed by the current, and arrives also at the seat of the disease; the cataphoresis only utilizes a part of the electrolytic actions, whilst the medicamental electrolysis uses them all.

Let us pass now into the clinical province, by some typical observations only, reserving a return to them in order to elucidate more thoroughly the question, if it be necessary.

No. I. Mrs. J. B., thirty-two years old, being attacked by articular rheumatism, great anæmia, frequent syncope. She cannot be touched on her left knee without crying out for pain, and was brought to me in a handbarrow on the 18th of September, 1888.

Employment of electrodes moistened with following solution:

R.—Benzoate of lithium,
Iodide of potassium,
Bicarbonate of sodium.....āā 5 grammes.
Aque destil..... 150 “

and continuous descendant currents during one hour from 11 milliamperes in intensity, with 5 piles from Chardin with hydrargyri bisulphas.

The 16th of October, one may touch the patient's knee; the 17th of October, the patient can lean upon her painful leg; the 18th of October, she is able to step slightly; and the 24th of October, recovered; she walks as well as any one; saw her again since; she looks upon me as her savor.

Mrs. V. D., forty-five years old, being attacked with an uterine fibroma, treated in vain beforehand by the electric currents; she presented herself before me the 10th of March, 1889. I decompose the iodide of potassium upon the tumor itself, by putting it into the tube open at the negative pole. According to the Faradic rules, which govern the electrolysis, the iodine, seeking to reach the positive pole, will pass into the tumor; besides I noticed the decomposing action of the negative pole. At the positive, the iodine, freely expelled, will likewise penetrate into the tissues from the abdomen, with which the electrode is connected. The tumor is about 20 centimeters broad. Three months after, the uterus, a little bigger than naturally, is only 4 or 5 cubic centimeters in dimensions.

No. III. Mr. D. F., seventy-one years old, presents an enlarged prostate gland with dysury and uræmic symptoms. No sound passes through. (August 20, 1880.) It is the time of the holidays. I meet with no surgeon, and decide to undertake the supra-pubic tapping. I put a soft sound in the hole made by the trocar; the uræmia ceases, but my pa-

tient being threatened by a probable new attack, I electrify his prostate; the negative pole put in the urethra, receiving iodide of potassium drop by drop; the positive pole put into the rectum and receiving the same solution. The currents are 5 milliamperes in strength, their employment enduring ten minutes. After twenty sittings only the patient recovered and set out for the country.

No. IV. Mr. René Belin, M.D., from Paris, sent me successively two gonorrhœa patients, who could not be cured by any other treatment, thinking that my method acting *loco dolenti* would alone be able to cure them. I applied nitrate of silver in the urethra by the positive pole, the negative touching the perineum during five minutes. The positive electrode modifying the mucous membrane is put on the more painful parts, 5 milliamperes are sufficient: 10 sittings for the first, 12 for the second are sufficient for the curing. There has the medicamental electrolysis acted as an injection, but made exactly on the painful parts, which never happens with the usual injection.

No. V. Mr. A. B., thirty-four years old, left hemiplegia in consequence of a phlebitis. The diagnosis in question was hysteric hemiplegia, or hemiplegia by brain thrombosis. No matter, I employ, April, 1889, the discontinuous currents with electrodes moistened with strychnine. At first frictions with tincture of nux vomica miscarry, and I discontinue them. Nevertheless the electric action produces in the arm a medicamental eruption of strychnine; even in one pole the too strong exciting of the vaso-constriction produces a local cyanosis during some hours.

I have chosen typical examples only, but my cases are more numerous. They are at the service of the American Society of Electrotherapia.

RUE DU PRINTEMPS MALESHERBES, SEPTEMBER 2, 1891.

ELECTRICITY IN ANCHYLOSIS.¹

BY DR. VON REITZ,
NEW YORK.

MR. PRESIDENT, GENTLEMEN AND LADIES: To whatever cause ankylosis may be attributable, it presents itself clinically as true or false.

The true form is based upon osseous union of the articular surfaces; the false form, of either fibrous adhesions or chondroid interposition, between the articular surfaces.

In either form we may find osseous, fibrous, and chondroid formations; but to form true ankylosis the areas of osseous union of the articular surfaces must be large. A small ossified area will not constitute true ankylosis.

As a guide for prognosis, it is well to remember that, as a rule (but not always), suppurative lesions of the joints are likely to be followed by true ankylosis, while catarrhal lesions never favor osseous union.

The differential diagnosis is often absolutely impossible, and it would be bad practice to resect a joint because it does not yield—force used—under ether.

False ankylosis, even with some osseous union, yields to the constant current with the assistance of massage and passive motion; provided the treatment is carried on earnestly and intelligently. And it is safer to expect an ankylosed joint to be false, and to treat it accordingly, than to use the saw at once.

¹ Read before the American Electro-therapeutic Association, September 26, 1891, in Philadelphia.

If, after about ten sittings, the joint does not improve, we then have time to use the saw.

At present I have a man with ankylosed elbow and wrist joints, following neglected erysipelas, which appeared to have undergone osseous union, and which, though slowly, yielded to my efforts. The pus had burrowed into the joints, and was left there for too long a time; therefore, bony union can be expected, but not diagnosticated.

As to the treatment of ankylosed joints by electricity, we have to remember that the synovial membrane secretes an alkaline lubricating fluid. Therefore, our aim must be to help nature by stimulating the functions of the synovial membrane.

If we remember the chemical effect of the constant current, we will find that the negative division of it creates an alkaline reaction, which has a dissolving tendency.

That is exactly what we need here. Consequently, the affected joint must be enclosed snugly by an electrode (of suitable material), and connected with the negative pole. Another large electrode may be placed over any indifferent part—best over the epigastrium—and connected with the positive pole.

With large electrodes powerful currents can be used without causing pain or inflammation. For the larger joints up to 100—even 120—m. a., in half-hour sittings, three times per week, are generally sufficient; but, of course, each case has to be treated according to its demands.

Much will depend on the massage, which has to be given before the current, on the attempts at, or perseverance in, passive motion, and on the constitutional treatment; also on the general hygienic conditions.

I will not cite cases, but state that fibrous ankylosis in the knee-joint has yielded to me in two months so as to allow the patient to walk up stairs and down without difficulty, though he had to use some effort; in two more months he walked the stairs without effort. I left him to himself, and now, after four months without treatment, he is well.

I intended to present before you a very interesting case of chondroid ankylosis of the cervical portion of the spine and occiput, and of both shoulder-joints.

That man suffered an injury thirteen years ago, and when I took charge of him—after some one else had already tried electricity on him, without success—his head and spine appeared as if cut out of one piece, and not the faintest motion was allowed by any force. The right shoulder-joint was also completely ankylosed; the left shoulder-joint, however, allowed motion to an extent of 20°.

This man improved wonderfully, and I am more than sorry he refused to be here, but hope to get his consent for some other occasion.

141 WEST 132D STREET.

SUMMARY OF MY PERSONAL EXPERIENCE WITH ELECTROLYSIS IN THE TREATMENT OF FIBROID TUMORS.

By J. H. KELLOGG, M.D.,
BATTLE CREEK, MICHIGAN.

I HAVE treated in all between 80 and 90 cases. Have summarized the results in 60 cases, all of which were treated previous to the present year.

Of these 60 cases, 4 were not treated a sufficient length of time to give the treatment a fair trial, only 1 or 2 applications being made. Nine cases were made worse, or not much benefited. One of these was a case of soft myoma, which, in my observation, does not yield satisfactory results from this mode of

treatment. In 5 cases, the tumor was not diminished in size, but other symptoms were considerably relieved. In 11 cases, the tumor was not diminished, but the other symptoms, pain, weight, etc., entirely disappeared. In 17 cases, the tumor was considerably diminished in size and the patient restored to good health. In 14 cases, the tumor disappeared entirely, or became barely perceptible.

Of the cases treated long enough to give the treatment a trial, 84 per cent. were substantially benefited, 75 per cent. were practically cured, and in 55.3 per cent. the patients were not only restored to good health, but the tumors were considerably reduced in size, or disappeared entirely.

From a study of these cases, as regards the nature of the tumors, I found 32 were interstitial, 9 sub-peritoneal, and 15 sub-peritoneal and interstitial. In 1 case in which the greater part of the tumor was interstitial, a portion protruded into the cavity of the uterus. The results in these several classes of cases were as follows:

Of the 32 interstitial tumors, in 9 cases the tumor was diminished in size and other symptoms cured. In 6 cases the tumor was not diminished in size, but the other symptoms disappeared. In 9 cases the tumor was not diminished, but other symptoms were in part relieved. In the 14 cases which comprised all the cases completely cured, both the tumor and the symptoms disappeared. In a few instances some small trace of the tumor still remained.

In the 9 cases of sub-peritoneal growths, 4 were not benefited, or made worse. In 1 case there was a slight benefit; in 2, other symptoms were relieved, but the tumor was not reduced in size; and in 2, the tumor was reduced in size and other symptoms wholly relieved.

In the 15 cases in which the tumor was both sub-peritoneal and interstitial, 5 cases were a complete failure, 1 slightly benefited, 4 relieved of symptoms without reduction of tumor, and in 5, there was reduction of tumor and cure of other symptoms.

From these statistics, it appears that the cases of fibroid, which are most benefited by electrolysis are cases in which the growths are interstitial in character. Those next most likely to be benefited are cases in which the growth is interstitial and sub-peritoneal in character. Those least likely to be benefited, are sub-peritoneal growths. Doubtless those most amenable of all to treatment are sub-mucous growths, but of this class no well defined cases have come under my observation, with the exception of 1 case referred to, in which a small part of the growth was sub-mucous in character. In this case the patient made a good recovery, the sub-mucous portion of the growth sloughing away and the interstitial portion gradually diminishing until the uterus was restored to nearly its normal size.

I have arranged a table, which concisely presents the results of treatment in the 56 cases, according to which it appears that of the cases of interstitial fibroid, 43.7 per cent. were cured, while all were benefited and none made worse. Of the other varieties, none were absolutely cured, and in the cases of sub-peritoneal growths, 44.4 per cent. were either not benefited, or made worse, and of the sub-peritoneal and interstitial, 33.3 per cent. of the cases fall in the same category:

	Number of cases.	Per cent. cured.	Per cent. symptoms cured, tumor diminished.	Per cent. symptoms cured, tumor not diminished.	Per cent. symptoms slightly benefited, tumor not diminished.	Per cent. not benefited, or made worse.
Interstitial.....	32	43.7	28.3	18.7	9.	
Sub-peritoneal.....	9		22.2	22.2	11.1	44.4
Sub-peritoneal and interstitial.....	15		33.3	26.6	6.6	33.3
Interstitial, excluding those cured.	18		50.	33.3	16.6	

It having occurred to me that the age of the patient might be a factor of some considerable importance in these cases, I made a study of my cases from this standpoint, and found that of the 14 cases in which no material results were accomplished, 78.7 per cent. of the patients were under forty years of age, and 42.7 per cent., or nearly half, did not exceed thirty-five years of age. The cases of fibroid tumor in which other symptoms were cured, but in which the tumor was not diminished in size, the average age was 43.7 years. Cases in which the tumor was considerably diminished in size, and the patient restored to good health, averaged forty years of age. The 14 cases in which the tumor entirely disappeared, or became barely perceptible, has an average age of 37.9 years. The low average in this class of cases is evidently due to the fact that in nearly all the cases the tumors were small. If the patients had been older the tumors would doubtless have been larger. Small fibroid growths doubtless exist in many cases for years before they are discovered, giving more or less inconvenience, but without making the patient aware of the real cause of the difficulty, not being large enough to be readily recognized.

In the earnest, and sometimes bitter, discussion of the proper method of treating fibroids which has been going on between electricians and surgeons, particularly during the last few years, many unfair positions have been assumed, and it seems to me that both sides have taken extreme grounds. There are, unquestionably, cases of fibroids which may be satisfactorily treated by electrolysis, and other cases which are fit subjects for the surgeon. There is still another class in which the patient herself, or special circumstances, must decide which mode of treatment shall be adopted. In my opinion, electrolysis may be properly employed, and with expectation of success.

1. In cases of small or moderate-sized tumors.
2. In interstitial growths of any size.
3. For relief of hemorrhage and pain in any class of tumors.
4. As a means of expediting the climacteric change in any class of cases in which the application is well borne.

Cases should be subject to surgical treatment; either removal of the appendages or hysterectomy.

1. In cases of very large tumors, which have resisted the application of electrolysis for a reasonable length of time, and in which there is an uncontrolled hemorrhagic tendency. The hard multi-nodular fibroids are most likely to be benefited by this operation.

2. In cases of suppurating tubes, or a seriously diseased condition of the appendages. A diseased condition of the appendages is certainly not rare in

cases of fibroid disease of the uterus, especially in old cases. In all cases of uterine fibroid in which I have operated for removal of the appendages, I found the latter seriously and hopelessly diseased.

3. Hysterectomy is the only remedy in cases of soft oedematous myoma. These tumors often develop after the menopause. They are seldom hemorrhagic, and are likely to grow to an enormous size.

I have operated for removal of the appendages in 10 or 12 cases of this sort; have performed hysterectomy in 6 cases, and removed pedunculated sub-peritoneal fibroid tumors in 4 cases. Have had 1 death, from removal of the appendages, in which case the patient was very low before operation, having pulse of 160. Have had but 1 death from removal of an enormous soft oedematous myoma, weighing forty pounds, in an aged woman. The patient rallied well from the operation, but the tumor had been grown fast to the anterior wall of the abdomen for so long a time that very vascular connections had been established, so that the return flow of blood from the tumor was chiefly through the abdominal wall. After removal of the tumor, very extensive serous oozing occurred, and the patient died twenty-four hours after operation, apparently from serous hemorrhage. Several quarts of serum was found in the peritoneal cavity at the post-mortem examination.

As regards to the safety of the three methods of treatment proposed—hysterectomy, ovariectomy and electrolysis—it must be conceded that electrolysis, although it can never be considered perfectly safe, is a much less formidable operation than either ovariectomy or hysterectomy. In order to get good results from electrolysis, however, it is necessary to observe the most scrupulous care, not only in the applications of the electrical current, but in the after-management of the patient. When gynecologists send patients off to their homes on a street car, in a carriage, or on a railway train, a distance of two to twenty miles after the application of 100 to 300 milliamperes of current, it must not be a matter of surprise that now and then bad results are experienced. It would be, indeed, a surprise if such patients did not sometimes suffer from frequent attacks of pelvic inflammation; so in the end they may be worse than at the beginning of treatment. It is my custom to send patients to bed for twenty-four hours after each application of the current, and in some instances it is necessary to keep the patient in a horizontal position for two or three days, as a safeguard against inflammatory reaction. On this account, I think the treatment can be carried on much more satisfactory in a hospital, where the patient can be under constant observation, than in ordinary office practice.

Another cause of failure in the employment of electrolysis, is neglect to use such other means as are known to be serviceable in the management of these cases. I do not think it the duty of the surgeon to neglect to employ for his patient whatever remedy he believes may be beneficial simply for the purpose of enabling him to differentiate more exactly the results of his therapeutic efforts. I have met a number of cases in which the hemorrhage, while not readily controlled by electrolysis, speedily yielded when ergot in efficient doses was added, although previously the employment of ergot had been ineffectual. I have employed hydrastis with success in similar cases, and also invariably resort to the use of hot vaginal douching, employing alum and other astringents, both with the douche and the tampon.

In hemorrhagic cases I invariably begin by thorough curetting of the endometrium, which enables me to

secure much more marked and immediate results than if the electrolysis alone is employed. I find also that by this means the disposition to increase of hemorrhage, which is often noticeable at first when electrolysis is employed alone, is wholly avoided.

The hygiene of the patient, and all measures calculated to improve the general health, must receive careful attention.

In the study of the action of the electrical current I have become more and more satisfied that its chief curative action in these cases is through its cauterizing effect upon the endometrium. The benefit often obtainable in these cases by thorough curetting has long been recognized. Electrolysis accomplishes the same results, not so rapidly, but more efficiently, in that its action penetrates the uterine tissues to a greater or less extent, according to the strength and the duration of the application. I have observed in a number of cases slight febrile attacks following strong applications of the current, which were attended by symptoms of phlebitis, and have noted that in these cases the most rapid improvement is apparent. In one case a tumor, which reached nearly to the epigastrium, of many years standing, diminished more than one-half in size within three months as the result of 2 or 3 applications of the current. After the third application, in which a current of a little more than 300 milliamperes was employed, the patient suffered a severe attack of phlebitis, not only in the tumor, but extending into one limb. For several days the patient was so ill I despaired of her life. She made a good recovery, however, and is well to-day.

Several other similar experiences, in which the symptoms were not so violent, however, together with the fact that the greatest improvement noticeable is in cases of sub-mucous and interstitial fibroids, have convinced me that the current acts chiefly through its polar, rather than by any subtil inter-polar action. Interpolar action of the current must, necessarily, be transitory, whereas the destruction of tissue produced by the cauterizing action of the positive pole, which I use exclusively in the treatment of this class of cases, is something tangible, efficient and permanent in character, as the result of which blood-vessels are plugged by coagulation, and afterwards permanently closed by cicatrization, and thus the nutrition of the morbid growth materially lessened. My constant observation has been that a tumor to be benefited by electrolysis must be of such a nature and located in such a manner as to be influenced by an impression upon its vascular supply, such as described.

It seems to me that surgeons are somewhat chargeable with unfair arguments, when they assert that no case can be produced in which a fibroid tumor has been made to disappear by the employment of electrolysis, and then insist, when a case is presented to them, that it was either a case of sub-involution or that the disappearance of the tumor was a mere coincidence, as such tumors have been known to disappear when electrolysis was not employed. The only fair and scientific attitude to be assumed, it appears to me, is to hold one's self in readiness to employ electrolysis in cases suited to its application, and equally willing to subject to surgical treatment such cases as are unsuited for treatment by the electrical current.

In the *British Med. Journal*, of October 31, 1891, is described the case of a boy affected with jaundice, covering the upper half of his body and ending abruptly at the level of the umbilicus.

THE INFLUENCE OF GRAVEYARDS ON PUBLIC HEALTH, OR THE SANITARY DISPOSAL OF THE DEAD.¹

By J. W. CARHART, M.D., C.M., D.D.,

LAMPASAS, TEXAS.

THE question of the disposal of the dead bodies of human beings is one that has attracted the attention of men in all ages. As the years roll by this question thrusts itself upon our attention with accumulated force, and demands a wise and proper settlement.

One will see, at a glance, that it is surrounded with peculiar difficulties. If it were a *simple* question it would be readily solved. There would be no difficulty in approaching and disposing of it from the standpoint of sanitation. The matter of economy in the disposal of the dead would involve but little time and labor to settle.

The element of propriety is one upon which most people, in enlightened communities, could readily agree. The medico legal aspect is one involving no great difficulty. The chief trouble in the settlement of the question grows out of the æsthetic and the sentimental aspects.

Love and veneration for departed friends are natural to the human breast. Their absence is the badge and stamp of brutality; indeed, it degrades one below the beasts of the field, who bellow and grieve around the spot where a fellow has fallen. This sentiment cannot be treated lightly in the discussion of this serious and momentous question.

Such a disposal of the dead as would shock the feelings of the refined and enlightened masses can never become general. It is for this reason that so many methods of disposal have been discarded in the past. Love hangs about the couch of the dying and whispers words of cheer and comfort, and takes the parting hand at the brink of the stream beyond, whose farther shore we cannot see; and when the spirit has flown to that world where faith builds eternally, Love still clings to the mortal remains until Nature repels with tissue decaying and faded beauty mocks with ghastly repulsiveness.

Not even then does Love quit the scene. When the body is buried in a lonely grave Love plants the sprig of acacia, even though it be among "rubbish," lest the grave should be forgotten.

"Perhaps in this neglected spot is laid
Some heart once pregnant with celestial fire;
Hands that the rod of empire might have sway'd
Or waked to ecstasy the living lyre.

"Yet, e'en these bones from insult to protect,
Some frail memorial still erected nigh;
With uncouth rhymes and shapeless sculpture decked
Implores the passing tribute of a sigh."

Love has woven sweetest fancies into imperishable verse, and hung the tribute in bright garlands about the sombre portals of the tomb.

So Robert Pollock sings of Helen at her grave:

"Watch there, my hopes, watch Helen sleep,
Nor more with sweet-lipped fancy rave;
But with the long grass sigh and weep
At dewy eve, by Helen's grave."

It becomes us, then, to approach this question of "The influence of graveyards on public health" with circumspection, gentleness, fidelity, and truth.

¹ Read before the Mississippi Valley Medical Association at St. Louis, October 15, 1891.

A brief sketch of the history of the methods of the disposal of the dead will not be out of place at this point in our discussion.

Every one knows that the methods of disposing of the bodies of the dead have differed with different nations and people, and at different times. The most common modes have been interment in the earth, and burning on a funeral pile.

Burial in the earth is, doubtless, the oldest mode. The graveyard, therefore, has the stamp of antiquity, and yet, in the estimation of the masses, is not antiquated.

The practice of burning the bodies of the dead was very general among the Greeks and Romans. After the burning the ashes were collected and deposited in a tomb or urn.

It is recorded that Sulla was the first member of the Cornelia gens who was burned.

So far as we can learn the Egyptians never practised burning their dead.

Interment of the dead was always practised by the lower orders among the Romans. Tacitus speaks of the embalming and interment of Poppæa, the wife of Nero, as a deviation from the general practice.

It is quite probable that the early Christians never practised burning of the dead, and the custom among the Greeks and Romans had gradually faded out before the conquering march of Christianity. This may not have been the result of direct teaching of Christianity, or of its contemplated influence, for we find many practices clinging to the higher forms of civilization, which are not fairly chargeable to Christianity, which is the fosterer of those forms of civilization.

It must be admitted, however, that both among Jews and Christians the common, if not universal, method of disposal of the dead in earlier ages was by interment in the earth.

Thus we read in Genesis xxiii, 2-4, "And Sarah died in Kirjatharba; the same is Hebron in the land of Canaan: and Abraham came to mourn for Sarah, and to weep for her.

"And Abraham stood up from before his dead, and spake unto the sons of Heth, saying, I am a stranger and a sojourner with you; give me a possession of a burying place with you, that I may bury my dead out of my sight."

And again in II Chronicles xxxii, 33, we read, "And Hezekiah slept with his fathers, and they buried him in the chiefest of the sepulchres of the sons of David; and all Judah and the inhabitants of Jerusalem did him honor at his death."

In New Testament times the dead were buried. Christ's body was wrapped in clean linen and laid in the tomb of Joseph of Arimathea. In the Acts v, 6, we read: "And the young men arose, wound him up, and carried him out, and buried him." So that Ananias, as bad as he was, received decent burial at the hands of Christians.

"Investigations among the sepulchral tumuli of the northern nations show clearly that, though before the introduction of Christianity the practice of cremation prevailed; that of burying the dead unburned was practised also in the later periods of the prehistoric era, in Norway and Denmark, as well as throughout Germany, France and England. Tacitus notices the simplicity of the funerals among the ancient Germans. Like the Romans, they buried their dead. The things which a German valued most were his arms and his horse; these were added to the funeral pile, with the persuasion that the deceased would have the same pursuits in his new state of existence."

The Parsees at Bombay have a peculiar manner of disposing of their dead. They scorn to rot in the earth like Jews, Christians and Mohammedans, and to be burned, like the Indians. They allow their dead to be devoured by birds of prey.

Herodotus says of the ancient Magi, that they never interred their dead until they were torn by birds or dogs.

There is a people in the southern part of Russia who think that they can show no greater honor to their dead friends and relatives than to eat them.

You will observe, from this rapid sketch of the history of the disposal of the dead that the methods at different times, and among various peoples, have widely varied.

You will observe also that the particular method has been due to custom, without any special reason on the one hand, or to religious opinions or beliefs on the other.

The development of these two facts is the chief reason for the sketch of history I have here presented.

Custom or habit has its power which few minds, however enlightened, or broadened by education and culture, are capable of ignoring.

We are all apt to pride ourselves on the customs of our ancestors. Some even go so far in their backward reach to the habits of illustrious progenitors as to apply the term "monkeying" to idle intrusiveness. Is not this carrying things too far? Is it not time for enlightened Christians and scientists of the nineteenth century to ask the reason for the grave customs of the fathers?

If we shall continue to bury our dead, let it be for some higher reason than the practice of the Jews and early Christians.

If we propose to follow Jewish customs, let us bury our dead swine and not eat them.

I said that religious opinions and beliefs were another reason for the practice of the burial of the dead.

One's religion and politics are too sacred to admit of meddlesome interference, or trifling from other people.

We should grant to all others what we claim for ourselves. I therefore approach this feature of my subject with due caution, and with the broadest charity.

The hope and expectation of the resurrection of the body entered into the faith of the Jews, and constitutes a gem in the resplendent faith of the Christian. Nothing should be said by Saducee, Scientist or Sophist to mar the beauty of that gem of Christian faith.

If I knew it to be an error I would not rob the mother's breaking heart of the only last hope that sustains her, that she shall meet her deceased baby on the morning of the resurrection, and clasp it to her breast as she used to do.

He who would rush into the "Holy of Holies" of a sorrowing human heart and commit vandalism there by breaking to pieces the sacred things of that temple, without the ability to replace them with better, deserves execration which would melt my pen or scorch these lips should I attempt the fiery words. Far be it from me then to disregard this sacred hope.

But may I not, with all delicacy, say that a mistaken idea in regard to God's ability to raise the dead is at the foundation of many a Christian's opposition to cremation and his strong preference for burial in the earth?

Is not the notion of God's limited power, derogatory of His character—does not limitation undeify

Him? What Christian will deny a resurrection to those buried at sea and consumed by the monsters of the deep, or to such believers as are accidentally cremated in burning buildings?

The Christian must hold that, since God is God, He can as readily recall armies of departed from the ocean, and the places laid waste by fire as from the worm infested grave:

"How frightful the grave,
How deserted and drear,
With the howls of the storm wind,
The creaks of the bier
And the white bones,
All clattering together."

My faith grasps the thought that around Vesuvius, where thousands were both burned and buried, armies of the living will start from the ruins of Herculaneum and Pompeii—those who were burned as well as those who were buried—the former, mayhap, purer than the latter, as fire is a purifying element of God's universe.

Having thus disposed of some of the most vexing questions surrounding this subject, we desire to look at it as sanitarians uninfluenced by prejudice, custom, or religious belief.

The word cemetery is from the Greek, and signifies "a place of rest or sleep."

This is a very beautiful idea, and Christianity alone has undertaken to make the place of the burial of the dead beautiful.

Pagans have erected mausoleums, the most costly on earth, as instance, the Alhambra, the tomb of Cæcilia Metella, and the tomb of Hadrian on the banks of the Tiber, best known as the castle St. Angelo, but nowhere in Pagan lands are cemeteries to be found. Well kept cemeteries are rare in Christian lands. The graveyard is the common, almost universal burying place of the dead.

They were formerly in connection with the church, and hence were called churchyards, so that, as the worshipers came to the house of God they might be reminded of their "latter end," as they looked upon the desolation that reigned there. This, shall I say, accursed practice made religion a gloomy subject, and without doubt was the occasion of the ruin of thousands of souls.

I have in my memory now the picture of a churchyard, possibly the counterpart of the one in which Gray wrote his immortal *Elegy*. It was in a lonely place, at a cross-roads. The church, standing back from the road a respectful distance, was dilapidated; the paint was worn off by the storms of years, the blinds were broken and fallen to the ground, or else hanging by one hinge, aslant the weather boards; the fence was broken down in places, and careening where it pretended to stand; the graves were overgrown with weeds, and tombstones black with age had fallen prostrate as if in mourning, or were leaning, as stalks of corn after the winds and frosts of autumn. Blackberry bushes were rank and tall, and their heavy odor crept into the windows and modified the heavy, pent up atmosphere of the sanctuary; swine had rooted the place over, as if to show contempt for boasts of human greatness, whilst irreverend children from a little country school-house near by had tried their skill by aiming spit-balls at the neglected tombstones. In summer time the swallows and song birds had perched upon the sculptured marble and had pronounced, in their own way, "Dust to dust."

Graveyards are generally situated on high ground, frequently above the level of village cities and city

elevations, and the wells and other sources of water supply receive the drainage from these enclosures of the dead.

In very many instances graveyards are found in the very centers of large cities. The great city of Philadelphia has such an enclosure, where sleep the remains of Benjamin Franklin and his wife.

If that old scientist and sanitarian could rise from his dusty, worm-infested bed, he would ask to be taken without the city limits where his remains would not endanger public health, and where the earth would not forever tremble beneath the crash of ponderous wheels.

The decomposition of animal substances develops a gas, known as carbonic acid, which, though it exists in nature in atmospheric air in the proportion of one to one thousand, when much in excess of this the atmosphere is poisonous, and suffocative, as in close rooms, occupied by a number of people. In the ordinary process of respiration oxygen is consumed and carbonic acid gas is generated, and the respired air soon becomes deadly; as was the case in the "Black Hole" in Calcutta.

Besides carbonic acid gas, there are other and more deadly gases generated in the decomposition of animal substances, and which aid in the spread of epidemic affections, more particularly fevers of a low type, such as typhus and the like.

"The injurious consequences to health from the presence of a dead body some times in a state of rapid decomposition, in a small, ill-ventilated apartment, particularly when death has been the result of malignant diseases, cannot be disputed, and the moral effect on the living is degrading."

The recognition of the numerous evils attended on the usual church and churchyard interments, in England led in 1852, to the passing of the Act 15 and 16 Vict., cap. 85 "to mend the laws concerning the burial of the dead in the Metropolis," and this followed in the succeeding year by the Act 16 and 17 Vict., cap. 134 for extending the provisions of the Act of 1852 to places beyond the Metropolis, in England and Wales. Many other acts for extending the provisions or for regulating minor details have followed. In 1855, the 18 and 19 Vict., cap. 68 extending the measure to Scotland; and the 19 and 20 Vict., cap. 98 in 1856, to Ireland.

By these acts intra-mural interments in England are rapidly being discontinued.

The dread of being buried alive is common; and the belief that many are thus buried is very general. There is almost no evidence in support of such a conclusion. In consequence of the development of gases, to which we have already referred, the coffin is frequently burst asunder, the shroud torn, the body rent and frequently turned in its coffin. The discovery of such a condition of things has led to the belief spoken of.

This gas, not unfrequently rises to the surface of the ground and may assume, as marsh gas sometimes does, a phosphorescent glare, which has led the ignorant to believe that graveyards are the habitat of ghosts. We have the word ghost from the German *geist*, signifying gas, breath, spirit.

In conclusion, then, the summation of the whole matter is as follows:

1. From whatever standpoint this subject is approached it must be with care and gentleness, since the graveyard, though a constant menace to public health, has a pseudo sacredness, fostered by the profoundest sentiments of our natures.

2. This method of the disposal of the dead should be founded on reason and not on custom or sentiment.

3. The interment of the dead in the earth was never enforced by any statute, Jewish or Christian, and was merely incidental to both dispensations.

4. No law, human or divine, requires us to dispose of the dead in a manner prejudicial to the health and comfort of the living.

5. Whilst it may be an open question as to the right of the State to dictate as to the manner of the disposal of the dead, except in exceptional cases, it is clearly the province and duty of the State to prevent such disposal as will, in any wise jeopardize the interest of the living.

6. From all the facts at our command, we are led to the conclusion that, the graveyard should become a thing of the past; and that incineration is the method most in accordance with science, sanitation, æsthetics, reason and religion.

7. We would add, as a corollary to these several conclusions that, since the intelligent, broad-minded

physician is the almost exclusive guardian of public health in seeking to prevent the development and spread of disease, it is plainly his duty, when cemeteries are being located, to use his best endeavors to have them so placed as to jeopardize as little as possible the public health; and for its moral effect he should encourage efforts to beautify existing cemeteries; and that he should seek, as fast as possible, without too much violence to the tender sensibilities of the masses, to encourage incineration of the dead, or some other method more in harmony with sanitary science than the common modes now practised.

If the thoughts we have here presented shall be instrumental in leading any of my professional brethren, or of the public at large, to better thoughts in regard to the disposal of the bodies of their dead, or of the dead in communities generally, thus contributing to the preservation of the health and happiness of the living, we shall feel that we are more than compensated for this labor of love, and interesting study.

DISPENSARIES OF PHILADELPHIA.

TITLE.	LOCATION.	AGE.	DEPARTMENT AND HOURS.	CHARGES.	PATIENTS TREATED.			AVERAGE NUMBER OF PATIENTS.	NUMBER OF PRESCRIPTIONS.	REMARKS.	NAMES OF PHYSICIANS.
					ADULTS.	CHILDREN.	SPECIAL DISEASES.				
Berean (Presby.) Dispensary.	1912 S. College ave.	11 months	Medical and surgical, daily 2 to 4 P. M. Dental, daily 4.30 to 6.60 P. M.	Fee 25 cents a visit, if able to pay.	Yes	Yes		30 to 60 per month.	60 to 100 per month.	Will reopen about November 1st.	Caroline V. Anderson, M.D.; Hannah T. Croasdale, M.D.
Homœopathic Dispensary.	2055 Kressler street.	5½ years.	Open Monday, Wednesday and Friday 1 to 3 P. M.	10 cts. each prescription.	All	All		300 per month.	700 per month.		F. M. Earle, M.D. (Homœopathic).
Homœopathic Dispensary.	1336½ N. Twenty-first street.	8 years.	All diseases 10.30 to 12 M. daily.	Free.	Yes	Yes		200 per month.	Medicine furnished.		E.W. Sackett, M.D. (Homœopathic).
Charity Hospital Dispensary.	1832 Hamilton street.		Diseases of women and children, medical and surgical. Clinics daily 12 to 1.30 P. M.	Free.	Yes	Yes		325 per month (new.)	350 per month.	Expect to enlarge the hospital in the near future.	Chief Resident: J. D. Moore, M.D. Assistant: W. J. Pennoek, M.D. Diseases of Women and Children: Drs. Jos. Lopez, Justin Sinexon. Medical: Drs. Abner Chase, A. M. Seymour, Thomas Ely. Surgeons: Drs. W. Balt, W. K. Shea, Geo. Stubbs. Consultants: Drs. H. Evans, W. H. Pancoast, H. St. Clair Ash.
Northern Dispensary of Phila.	608 Fairmount ave.	75 years.	Medical diseases of eye. Surgical diseases of throat, nose and ear. Lying-in diseases of women. Diseases of skin. Hours 8 A. M. to 1 P. M.; 3 P. M. to 6 P. M.	No charge.				19,684 (yearly.)	32,600 (yearly)		Resident Physician: Robert J. Hess, M.D. Attending Physicians and Surgeons: Drs. J. O. Nock, Edward Matlack, A. M. Seymour, W. S. Shimer, W. Thomas Miller, Geo. T. R. Kressler, T. Sebring Slifer, W. H. Noble, Henry E. Applebach, W. E. Parke. L. Brewer Hall, M.D., Eye; H. W. Stelwagon, M.D., Skin; Chas. P. Noble, M.D., Diseases of Women; E. Baldwin Gleason, M.D., Throat Nose and Ear. Consulting Physicians: Drs. Wm. Pepper, H. W. Rühl, W. M. Welsh, Owen Osler, Levi Curtis, J. M. Da Costa. Consulting Surgeons: Drs. D. Hayes Agnew, E. B. Shapleigh, H. Seaman, James Collins, E. W. Holmes, Jos. S. Gibb. Consulting Physicians to Lying-in Department: Drs. Theophilus Parvin, W. B. Atkinson, William Goodell, D. Longaker. District Physicians: Drs. Slifer, Kressler, Matlack, Seymour, Miller, Nock, Applebach, Shimer, Noble, Parke.
Pennsylvania Eye Ear and Throat.	Thirteenth and Chestnut streets.	4 years.	Daily except Sunday, 11 A. M. to 12 M.; 6 to 7 P. M.	According to ability to pay.	100 daily.		Ear eye and throat.				Surgeon in Chief: George Strawberry, M.D.; Drs. Chas. Shaffner, L. J. Lautenbach, J. Heilman, W. W. Moorehead, Alex. Brown, L. J. Hammond.

TITLE.	LOCATION.	AGE.	DEPARTMENT AND HOURS.	CHARGES.	PATIENTS TREATED.			AVERAGE NUMBER OF PATIENTS.	NUMBER OF PRESCRIPTIONS.	REMARKS.	NAMES OF PHYSICIANS.
					ADULTS.	CHILDREN.	SPECIAL DISEASES.				
Philadelphia Dispensary for the Medical Relief of the Poor.	127 South Fifth street	105 years.	Obstetrics and Diseases of Women, 2.30 to 4 and 5.30 to 6.30 P. M. Other cases, 9 A. M. to 5 P. M.	None.	All.	All.		24,479 last year.	50,745		District Physicians: T. M. Tyson, M.D., Southwestern District; A. N. Jacob, M.D., Northeastern District; J. H. Adams, M.D., South Middle District; Wm. M. Capp, M.D., North Middle District; A. C. Wood, M.D., Southeastern District; Edward Kirk, M.D., Northeastern District. Resident Physician: E. S. Vander-slice, M.D.; Assistant: Horace S. Lewars, M.D. Obstetrical Physician: Joseph Price, M.D. Consulting Physicians and Surgeons: Drs. D. Hayes Agnew, R. A. Y. Penrose, Wm. G. Porter, H. C. Wood.
Southwark Dispensary and Sick Diet Kitchen.	1719 South Ninth street	19 years.	Dispensary open daily, 12 M. to 2 P. M. Kitchen open daily, 11 A. M. to 12 M.	None.	All.	All.		9,088	18,176		Medical Director: John S. Ward, M.D. Physician in Charge: Samuel E. Walker, M.D.; Assistant: Richard Walker, M.D. Consulting Physicians: Surgeon, Louis W. Steinbach, M.D.; Diseases of Women, Wm. B. Atkinson, M.D.; Diseases of Throat and Lungs, J. Solis-Cohen, M.D.; Surgery, J. M. Barton, M.D.; Dermatology, J. V. Shoemaker, M.D.
Southern Dispensary.	318 Bainbridge street.	75 years.	Open daily, except Sunday, for treatment of all diseases, 9 to 12 A. M., and 2 to 4 P. M.	Free.	All.	All.		583 per month (new).	1,000 per month.		Resident Physician: William Notson, M.D.
Southwestern Dispensary.	Twenty-second and Bainbridge.		Medical, 10.30 A. M. Surgical, 10.30 A. M. Diseases of women and children, Wednesday and Friday at 1 P. M. Throat, nose and ear, Tuesday, Thursday and Saturday at 1 P. M. Diseases of Eye, Tuesday, Thursday and Saturday, at 12 M.	Free.	Yes	Yes		4,398.			General Medicine: A. E. Roussel, M.D. Surgical: A. Hewson, M.D. Gynecological: F. H. Elder, M.D. Diseases of Eye: G. H. Bell, M.D. Diseases of Throat, Ear and Nose, G. H. Macuen, M.D. Consulting Physicians: John H. Brinton, M.D., Wm. Thompson, M.D., G. S. Wilson, M.D., C. Turnbull, M.D., Theophilus Parvin, M.D.
West Philadelphia Dispensary.	4040 Market street.	6 years.	Eye, ear, nose and throat, daily except Sunday, 11 A. M., 1 P. M.	Medicine not furnished, charges are optional.	Yes	Yes		(about) 150 per month.	(about) 200 per month.		T. A. Downes, M.D.
Philadelphia Medical Mission.	519 S. Sixth street.	10 years.	Medical and surgical.	A nominal charge if patient can pay.		All.		1,619 House visits 503	2,565	Object is to give religious instruction and to rescue fallen women, combined with medical service.	A. B. Kirkpatrick, M.D.
Rush Hospital Dispensary.	Twenty-second and Pine.	3 months	Throat department, daily, at 12 M. Diseases of chest at 2 P. M.	Free services, small charge for medicine.			Diseases of throat and chest only.	75 per month.			Lawrence Flick, M.D., Charles Dulles, M.D., J. P. Crozer Griffith, M.D.
Penn Dispensary.	1141 S. Twentieth street.	6 years.	Obstetrics and Gynecology, 12 A. M. to 1 P. M., daily; medical and surgical, 2 to 3 P. M., daily; eye, 3 to 4 P. M., daily.	Small charge made for medicine.	All	All		300 per month.	500 per month.	Cases of confinement attended at homes free of charge. Cases treated on Sunday 2 to 3 P. M.	T. Ridgway Barker, M. D.; Thomas T. Bland, M. D.
Dispensary for Women.	1630 Cherry street.		Monday, Wednesday and Friday, 1 to 3 P. M.		Yes	No	Diseases of women treated.			Cases treated by electricity.	Wm. H. Walling, M. D.; G. Betton Massey, M. D.
Homœopathic Dispensary.	502 N. Tenth street.		8 to 10 A. M.; 2 to 4 and 6 to 9 P. M.	25 cents for medicine. Advice free.	All	All					F. D. Rothermel (Homœopathic).
Fairmount Dispensary.	413 N. Twenty-third street.		Daily, except Sunday. Surgical, 12 to 1 P. M.; medical, 6 to 7 P. M.; eye, Monday, Thursday and Saturday 7.30 to 8.30 P. M.								

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

IT is sometimes difficult to distinguish between a functional and organic heart murmur. An organic murmur is increased by anything that increases the force of the muscular contraction of the heart. If you make the patient walk about the room, or up and down stairs, so as to throw a little additional work on the heart, then the murmur becomes more distinct. Another distinguishing feature is that organic murmurs are more harsh than functional murmurs.

The seat of an anæmic blowing is to the left of the sternum, about the third costal cartilage, or over the area of the pulmonary artery. It is a systolic murmur.

In cases of marked anæmia, there is a purring, blowing murmur in the jugular vein, which is called the *bruit de diable*. It is a purring sound, like that made by a cat. Its exact cause is not known, but it may be due to some alteration of the relation existing between the blood and the containing vessel.

—Woodbury.

The amount of disturbance of health in trichiniasis depends altogether on the number and activity of the trichinæ absorbed—that is, it depends on the number of parasites introduced into the stomach during digestion and the number escaping from the alimentary canal into the tissues.

The parasites, in trichiniasis, are found particularly near the tendinous insertions of the muscles. In a case of acute infection, if a particularly sore spot be selected near a tendinous insertion, and a piece of muscle taken and placed under the microscope, the parasites may be easily seen. A heart murmur may be caused by the invasion and weakening of its walls by this parasite.

—Woodbury.

Fœtal teeth are always incisors. The children in whom they are found are generally strumous or cachectic. They are supernumerary teeth, usually falling out, and the process of dentition afterwards goes on in a normal manner.

Late teeth generally are found in bottle-fed babies; those who have been kept at the breast for awhile and then placed upon the bottle.—*Hollopeter*.

R.—Oleate of zinc..... 3j.
Salicylic acid..... gr. x.
Starch..... 3vi.

This makes an elegant toilet or dusting powder for use in irritation about a child's face.—*Hollopeter*.

One of the reflex disturbances connected with dentition is convulsions. Convulsions is a condition which generally starts in with slight tingling either in one hand or both, or in the face. It is a pleasing thought to the mother, on seeing the twitching of the little mouth, to think that baby is talking with the angels. Very poetical, but the cause is altogether unpoetical—a disturbance of the bowels. Finally, the child has a tremor, the muscles work more and more violently, until a terrific convulsion, terrible to the mother, confronts her. The child will throw itself back, its muscles becoming rigid. The convulsions are so violent that the face becomes black, and blood may even ooze from the mouth. After awhile the convulsions subside, the natural color of the face is restored, and the child falls into a sleep, perhaps to repeat the convulsion in half an hour or an hour.

The growing child, during the eruption of the temporary teeth, is in an exceedingly nervous condition. Add to that the slightest particle of undigested food, and you have a cause for convulsions. I have been repeatedly confronted with these forms of reflex disturbances, and have generally found them due to some irritant in the intestinal canal. However, while we speak of this condition as a form of indigestion, the convulsions would not have been manifested if there had not been irritation of the dental nerves.

When summoned to a case of convulsions, it simply means that you must have your wits about you. There is no position in which you will require more presence of mind than in the treatment of convulsions of children. The whole household is in confusion; everybody running after something or getting somebody; the child left by itself; the wretched mother crying in the corner; and you are expected to bring order out of this chaos.

The first thing for you to do, if the child is in convulsions, is to chloroform it. Chloroforming is a perfectly safe method of quieting it down, and by so doing you make a powerful effect upon the household.

You are supposed to have a child about one year old, commencing to erupt its first set of molar or lateral incisor teeth. If you find it in this condition, and the convulsions continue, use the following:

R.—Sodii bromidi..... 3ss.
Chloral..... gr. xij.
Aquæ menthæ..... f3j.

Give 3ss of this at a dose, and, if the child is not able to swallow, inject into the rectum a drachm of the above. Give this dose every fifteen or thirty minutes, until you have assured yourself that the child is thoroughly quieted down. Of course, if you suspect a gastro-intestinal disturbance, give a glycerine enema; but, above all, push the chloral and bromide in the proportions I have given. After that, place the child in a quiet, dark room, and withdraw food entirely for three or four hours; and if the child manifests any fever, order a hot mustard foot-bath and cool cloths to the head, and let it sleep off its chloral.—*Hollopeter*.

METHYLENE BLUE IN MALARIA—As it has been shown that both in dried and fresh blood preparations the malaria plasmodia can be perfectly colored by methylene blue, and as in both warm and cold-blooded animals it colors the red blood corpuscles, Guttman and Ehrlich hit upon the idea of trying it therapeutically in malaria. Their expectations have been realized, and the investigators have shown that methylene blue exerts a decided action on malaria poison. The febrile attacks ceased the first day of its use, and in eight days at the latest the plasmodia disappeared from the blood. The form of drug employed was the chemically pure prepared by Meister, Lucius, and Bruening. It was given in doses of 0.1 grm. in capsules five times a day in the fever free interval. In the first case it was given every three hours, in two cases of quotidian the five doses were given at hourly intervals. The remedy must be continued in daily doses of 0.5 grm. for at least eight days after the cessation of the fever. No disagreeable by-effects were observed, except slight bladder irritation. The daily excretion of urine was also observed to be increased. The urine was colored intensely blue. The intestinal evacuations contained the methylene blue in a reduced form, but they became blue on exposure. It was not ascertained whether the drug would prevent relapses.—*Med. Press*.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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BICHLORIDE OF GOLD TREATMENT.

A CHAIN of coincident circumstances has given this so-called specific a prominence that was never anticipated, and which the author seems unprepared to meet except on the lowest and coarsest levels. The very unusual medical agitation of the subject of alcohol and the inebriate during the past year has turned the public mind in this direction. This has added intensity to the moral and political temperance forces in the field, and has roused a feeling of alarm at the impending danger from this source. The victims of alcohol and opium, and their friends, have seized the idea of disease and curability by remedies, and are looking with credulous expectancy for any means which promise relief. The pledge, prayer and asylums are ignored in the hope of some new discovery that will promise the most extraordinary results, with the least effort in the briefest time. These are some of the favoring conditions for this new specific. The bichloride has been on the market for years, and analyses have always failed to find any gold in it, but where it was given as an opium antidote large quantities of morphine were present. Recently hypodermic injections of narcotics have been given as bichloride of gold for the chemical restraint they exercised over the drink impulse. After a few injections the victim of long standing is astonished that all taste and desire for spirits has disappeared. The extravagant promises for the remedy are sustained by this experience, and the conclusion is accepted that the desire for spirits is destroyed and the patient is fully cured. This belief is encouraged and grows daily until it becomes a propelling force that naturally carries the victim beyond the chemical restraint of the narcotics which is given him. Out of this comes the morbid confidence of perfect cure, and the strange delirium to pose as an illustration of the effects of this remedy and advertise it at all times and occasions.

Mystery, and a positive aversion for spirits, in a brief time, and extravagant claims were the elements which has suddenly brought out the bichloride.

Everywhere the statement of persons who boasted mildly of radical cure were taken as evidence, and the press and clergy caught the infection and helped on the interest by long sermons and editorials. The author of this remedy suddenly realized that a harvest of real gold was at hand, and, with a singular stupidity, claimed that the remedy was a new discovery in science, and that it would always destroy the drink impulse. Then, with greater stupidity, he attempted an explanation of the physiology of the remedy. Thus the mystery and interest, which might have been kept up, exploded by the daring assumption of its author. The bichloride is already a thing of the past, and is only one of many specifics that are pressing for recognition, and aiming to meet the credulous demand of the public.

In these quack efforts and remedies a certain number of cases get well, and ascribe their cure to the remedy. In this bichloride humbug, chemical restraint from narcotics and strong faith will, in some cases, hold the case long enough for Nature to bring on restoration. In a certain number of cases the disease had reached its natural limits, and the drink symptom would die out from any cause. The bichloride or even powdered brick dust would produce the same results. The same thing is seen in temperance and revival meetings, where inebriates, who have signed the pledge and been converted repeatedly, only to relapse again, finally use the same means and recover. The drink impulse has died away, and some physical change has taken place in the brain. The bichloride merely represents the demand of a large credulous public for other than moral remedies, to relieve this wide spread disorder. The chemical restraint which it gives the victim, under the impression of permanent breaking up of the drink impulse, is fatal in most cases.

The delirious confidence and faith has no real support, and must react, plunging the victim into greater depths of paralysis and degeneration. The bichloride will recruit a large number for all the various asylums and hospitals, and, like the saloon itself, it will grow on the ignorant credulity of its patrons. This is the age of empiricism in the study of alcohol and inebriety. The bichloride will be followed by other specific remedies which promise great results. Already several rivals have started, claiming larger number of cures and more certain restoration. Obviously the medical man has a grave duty to teach and direct the public mind in this matter. The drink problem and the inebriate are questions requiring scientific study and scientific means and remedies for their solution and cure. There are no miracles known in the realm of therapeutics; there are no drugs or combination of drugs whose values are enhanced by mystery. The degeneration from alcohol is only reached by the use of means along the line of scientific research.

T. D. CROTHERS.

ABADIE treats diphtheritic conjunctivitis by instillations of lemon juice, and recommends the same remedy when sloughing has followed the use of nitrate of silver. The applications are repeated in from five to eight hours.

Annotations.

THE material upon diphtheria will be held until next week, as we have found that by so doing we will be enabled to present our readers a much more extensive collection of views on the subject.

DR. S. R. KNIGHT, Superintendent for thirty-two years of the Episcopal Hospital, of Philadelphia, died, on November 14, of Bright's disease. Dr. Knight was immensely popular with his professional brethren. No one could tell a story better, or listen to one with more enjoyment. His administration of the Episcopal Hospital made it for many years the model hospital of this city.

DR. J. D. RIHL, died at his residence in Philadelphia, November 13, at the age of seventy years. Dr. Rihl had for many years been one of the most successful vaccine physicians of the city; one of those who had won the entire confidence of the community, and conferred greater benefits upon it than any dozen of the more pretentious specialists.

Letter to the Editor.

VAGINAL DOUCHE APPARATUS.

I HAVE read with interest an article in THE TIMES AND REGISTER, of November 7, concerning the treatment of vaginitis, as well as your editorial on improved vaginal douches. The theory that the best position for vaginal injections is the recumbent one may be correct; but in general practice, even where patients are able to have the services of an attendant and the use of the most elaborate appliances, my own experience teaches me that the use of the bidet, or its substitute in some form or other, is, in the long run, most convenient. The large bulb syringe made by Tieman & Co. or the continuous flow syringe made by Parker, Stearns & Sutton, and known as the "Alpha," if not more convenient are certainly more efficacious as a means of cure. The dry method of treatment referred to I seldom make use of. The hot douche, either plain or medicated, is almost always indicated. Generally speaking, the syringes we find in use are too small, and the supply of water inadequate to properly cleanse the vaginal walls. It is useless to recommend the hot douche when only a small stream of water can possibly reach the diseased tissues. The bidet can be found at almost all of the furniture stores in our cities and large towns. A temporary affair can be made at reasonable price by almost any carpenter, in a short time.

I seldom use a tampon after a vaginal douche, and, as I usually direct that the injections be employed just before going to bed, it would not be convenient to employ tampons in general practice. Instead of the tampon I use the large vaginal glycoboron suppositories made by Otis Clapp & Co, of Boston. These contain a drachm of boro-glyceride in gelatin, and can be readily introduced by the patient after taking the vaginal douche. These melt slowly during the night and thoroughly cover the diseased walls of the vagina, allaying irritation, and effecting a cure. I never employ nitrate of silver, permanganate of potash, tannin, oak bark, or any of the common preparations recommended. The sulpho-carbolate of zinc, which I recommended as early as 1874, I find

inferior to the glycoboron suppositories already mentioned.

Whenever it is desirable to employ a tampon, I prefer to use tanned jute, or refined oakum. I have used many different preparations, wool, cotton, etc., but do not find them equal to the jute.

Where vaginal inflammation is dependent upon malposition of the womb I make pessaries of tanned jute. For the past eleven years I have used no other form of pessaries, and find better results than I have ever been able to obtain with any other.

The Alpha syringe is most highly to be recommended on account of its continuous flow, and the abundance of water which it can afford.

The use of vaginal injections is so important in the treatment of disease that it is well worth practitioners' care and attention to insist upon some instrument capable of affording a copious water supply, otherwise one treatment would scarcely meet with success.

W. THORNTON PARKER, M.D.

MANCHESTER-BY-THE-SEA, MASS., NOVEMBER 10, 1891.

Book Notices.

ALL AROUND THE YEAR, 1892. Entirely new design in colors. By J. PAULINE SUNTER. Printed on heavy cardboard, gilt edges, with chain, tassels, and ring. Size 4¼ by 5½ inches. Boxed. Price, 50 cents.

This most charming calendar is composed of heavy, gilt-edged cards, tastily tied with white silk cord, and a delicate, silvered chain attached, by which they may be hung on the wall or elsewhere, and are so arranged on rings that they may be turned over as each month shall be needed for reference.

ESSENTIALS OF NERVOUS DISEASES AND INSANITY; Their Symptoms and Treatment. A manual for students and practitioners. By JOHN C. SHAW, M.D. Forty-eight original illustrations. Philadelphia, W. B. Saunders. 1892. Cloth, pp. 194, 12 mo. Price, \$1.00.

We hope that no student will buy this book; but we recommend it highly to the practitioner who has not purchased a work on nervous diseases for ten years. He will find in it so much that he does not know that he will be driven perforce to buy Gowers' or Ross', and thus great good will be accomplished. Furthermore, we can say that Dr. Shaw's primer is excellent, as far as it goes; and the illustrations are well executed and very interesting.

A MANUAL OF HYPODERMATIC MEDICATION; The Treatment of Diseases by the Hypodermatic or Subcutaneous Method. By ROBERTS BARTHOLOW, A.M., M.D., LL.D., etc. Fifth edition. Revised and enlarged. Philadelphia, J. B. Lippincott Company. 1891. Cloth, 8 vo., pp. 540. Price, \$3.00.

The author tells us that in the present edition this popular work has been recast, many articles rewritten, and other changes made; altogether resulting in an addition of about two hundred pages, besides an increase in the size of the page. These additions have been necessitated by the growing importance of the hypodermatic method of medication, consequent upon the development of the germ theory. As the book now appears it is a most excellent manual of hypodermatic medication. The new additions to the pharmacopœia are discussed with that clearness of statement that characterizes Bartholow, but with more conservatism than is shown in his earlier works. One will search in vain in the present book for any evidences of impaired mental power. On the contrary, it is written in Bartholow's best vein. Noth-

ing could be better said than his remarks on the Brown-Séquard testicular fluid; that unfortunate bantling, smothered at its birth by the ridiculous use of it made by the public press; always ready to sacrifice all else to the demand for a new sensation.

The Medical Digest.

ARISTOL has been injected into scrofulous abscesses with good results. Five minims of a 1 per cent. solution, in sweet almond oil, was the dose.

BURTON-FANNING says that a child three days old was seized simultaneously with jaundice and hæmaturia, both of which passed off on the sixth day, under the influence of mercury.

FOR VOMITING PREGNANCY.—

R.—Mentholis..... gr. xv.
Alcohol..... ℥v.
Aque..... ℥v.

M.—Sig. 3j every hour.

FOR GONORRHOEA.—

R.—Bismuth subnit..... 3vj.
Acaciæ pulv..... 3ij.
Morphinæ sulph..... gr. ij.
Aque..... 3vj.

M.—Sig. Inject 2 drachms thrice daily.

FOR FURUNCLES.—

R.—Acid. salicylici..... 3ij.
Emplast. saponis..... 3ij.
Emplast. diachylon..... 3j.

M.—Sig. For local application.

—Wile, *The Prescription*.

FOR diphtheria, Loeffler recommends gargling or painting with 1 to 1,000 bichloride solution, 3 per cent. carbolic acid in 30 per cent. alcohol, turpentine oil and alcohol in equal parts, with 2 per cent. carbolic acid; all to be applied every one or two hours.

RHEUMATISM.—In the treatment of this malady in many of its varieties, I have found no prescription equal to the following:

R.—Bicarbonate potassium,
Salicylic acid,
Iodide of potassium..... āā 3ij.
Tinct. colchicum seed..... 3ij.
Syrup orange peel..... 3ij.
Water..... 3v.

M.—Shake well.

Sig. A tablespoonful every two or three hours until necessary to diminish the dose and its frequency.

—J. B. Johnson, *Southern Clinic*.

BROMIDE OF ETHYL.—Speaking from my limited experiences, I feel myself encouraged to use this anæsthetic.

Its advantages are: speedy action, absence of stage of excitement, ready dissipation, no after effects, absence of danger, circulation and respiration not being adversely affected if given in the limited quantities recommended by Haffter; ease of application without assistance in any position and without preparation of the patient; pleasantness of the vapors.

As disadvantages should be mentioned its easy decomposition and its evaporation even in the primary bottles, and the price of the drug 35 to 40 cents an ounce.—Hæberlin, *Lancet Clinic*.

MAUREL claims as an axiom that no animal can survive the death of its leucocytes; and as those of man die in two hours at a temperature of 100.4° to 111.2° F., and in ten minutes at 111.2° to 113° F., the danger of high temperature is easily explained. But there is an evident fallacy here, as patients do survive a temperature of over 105°, continued for hours, in several fevers, such as measles.

FOR the removal of glass beads from the ear, it has been newly recommended to melt alum in a spoon over a flame, dip in the molten mass the end of a thin rod of wood, separated into its component fibers, and then to introduce the rod into the ear and lightly press against the foreign body. After half to one minute the now adherent bead can be withdrawn. The meatus is protected from injury by a funnel of stiff paper.—*Provincial Med. Jour*.

M. DE BAVAY has made some interesting studies on the saccharomyces and their relation to the typhoid bacillus. He showed that this bacillus grew best in broth, while cows' milk was not a very good culture medium, unless previously peptonized. Yeast interfered with the growth of the typhoid bacillus, and it was much more virulent when cultivated in an alkaline than in an acid medium. As yeast passes through the intestines unchanged it develops acid; hence if the food given be saturated with this harmless substance, the food and the intestines are alike acidulated and rendered unfit for the growth of typhoid bacilli.—*Brit. Med. Jour*.

URTICARIA.—There has been during the past season almost an epidemic of this excessively annoying eruption, confined to no age and no condition of life. The rash is likely to cover the whole body, and the itching is intolerable. The cause is obscure; arising, possibly, from a too free use of fruit and with certain atmospheric influences. The usual remedies, even when carefully selected, often fail in producing relief. The first indications is to produce free action of the liver and portal circulation. The itching is sometimes relieved by a wash of boracic acid, salt or cider brandy. Internally, half teaspoon doses of sulphurous acid well diluted with water, or iodide of potassium have sometimes relieved when other remedy failed.—*N. Y. Med. Times*.

ANTISEPTICS IN SURGERY.—A decided reaction has set in against the antiseptic douching of surgical wounds. One of the most emphatic protestations comes from Bergner, who, in an article on resection for the remedying of false joints in the limbs of children, ascribes his want of success to the use of chemical antiseptics.

He operated on five children whose ages varied from six months to three years. The method of operation adopted was that followed by those who delight in antiseptics, or Listerism. After exposing the false joint the fragments were resected and united by suture. An antiseptic dressing was applied, and the limb was put up in a plaster of Paris bandage. Every one of the operations failed. In the case of one of the children the operation was three times repeated. These unfavorable results he ascribes to the action of the chemicals on the bone tissue preventing the formation of callus. In a recent issue we have pointed out a still more serious drawback to the phenol antiseptics, to wit, the causation of osteomyelitis.

—*Med. Press*.

ANTI-KAMNIA, as far as we can learn, has not the antipyretic powers as the others mentioned, but as an analgesic and anodyne has proven itself a valuable remedy. It produces no cerebral or cardiac weakness, and causes no gastric disturbance. It maintains the first place as a remedy in acute rheumatism, and produces less of the disagreeable after-effects than the other coal-tar preparations. It does not arrest the intestinal secretions, and, like the above-mentioned remedies, is antiseptic.

—Carver, *Kas. Med. Catalogue*.

TREATMENT OF MALARIAL HEMATURIA.—I. Give hyposulphite of sodium in drachm doses every two hours until patient is freely purged, and then give in smaller doses until the entire body is saturated with it.

2. Give morphine and atrophine hypodermically to quiet the stomach, and to these add a blister over the epigastrium if necessary.

3. Give an abundance of water to work out the coagula that must necessarily accumulate in the urinary tubules after a hemorrhage. Hot water or hot lemonade is frequently better borne by the stomach than cold. Cupping over loins is also to be recommended.

4. The diet should be unstimulating. Fresh butter-milk is usually well borne and is also a mild diuretic, and I have come to rely on it as an article of food in this as in many other diseases.

5. The patient should, if possible, be kept strictly in a recumbent posture. My experience with quinine in this malady forces me to believe it a poison.

—J. W. Meek, *N. O. M. and S. Journal*.

VAGINAL EXAMINATIONS DURING LABOR.—Veit is strongly of opinion that they are sources of danger, and would banish them except under special circumstances. In spite of all antiseptic precautions, puerperal fever still crops up here and there, and he casts the blame, therefore, upon vaginal examinations during labor. Many distinguished obstetricians have pronounced in favor of omitting the usual internal examinations. The late Prof. Litzmann would only allow his students to make external examinations. The writings of Credé and Hegar tend to the same end, that internal examinations are best omitted. Leopold also advocates the same opinions and acts correspondingly; his observations have shown that the mortality may be reduced to a minimum in child-birth if internal examinations are not made. Veit is also of opinion that in normal cases, and these form the vast majority, internal examinations may be well replaced by careful external ones. In order to dispense with the internal examination, the external one must necessarily be made with the greatest attention, and he claims that it may be taught and practised with greater exactitude than has hitherto been the case. In his opinion, an internal examination should be made in the period of dilatation only in case of general disturbance (eclampsia, etc.), or improper presentation, and in the period of expulsion only in case of general disturbance, local abnormality, or improper position of the fetus. Just as little, he says, as a surgeon would pass a clean sound over a disinfected wound, and thus under the most favorable conditions without any justifiable cause, just so little should the obstetrician introduce his finger into the genital canal without adequate necessity. We do not pass the speculum or the sound into every patient, or chloroform in all cases. Why should we pass the finger into the vagina in all cases, whether there be necessity or not? Nothing but distinct in-

dications should lead us to vaginal examinations in child birth. The teaching may seem strange, but we may live to see the day when routine reiterated vaginal examination in labor shall be abolished.

—*Med. Press and Circular*.

GERMAN NOTES.

HERMAN D. MARCUS, M.D.

SCABIES.—Prof. Kaposi recommends following salve (to be used once only).

R.—Sulph. flor.,
Ol. fagi.....āā 3v.
Saponis virid,
Axung. porci.....āā 3x
Cretæ alb. pulv.....3j gr. xv.

The patient is then rolled in a woolen cover, not to excite perspiration, but because the wool absorbs the salve slowly, and the body will remain covered by the salve longer than if coming in contact with linen. The next day the body is powdered with amylum. No bath should be taken until the skin exfoliates.

—*Wiener Med. Zeitung*, April 5, 1890.

NEW MEDICINAL SOAPS.—In the different forms of pruritus a 5 per cent. superfatted *menthol soap* has been found of remarkable therapeutic value. It is used by soaping the body well while taking a bath, (lukewarm, morning and evening), or in pruritus localis the part affected should be washed with the soap. In obstinate cases it is advisable to leave the soap to dry on the body till the next bath (after twelve hours) will wash it off.

In pruritus genitalis, or analis, the parts should be washed three times daily with the soap.

Five per cent. Salol Soap is recommended in a number of obstinate skin diseases. Eichhoff has used the soap in eczema parasiticum and psoriasis vulgaris. He also recommends it in pityriasis versicolor, herpes tonsurans, favus, impetigo contagiosa, eczema marginatum.

Aristol Soap (aristol, 2 per cent.; soap, 98 per cent.) is of great value in superficial skin diseases, psoriasis, parasitic eczema, and other fungus diseases.

—*Ertzl. Central Anzeiger f. Oesterreich*.

DIURETIN (Theobromin — Natro - Salicylicum. Knoll). Diuretin has been used by Prof. Drasche in the Vienna Allgemeine Krankenhaus in 40 cases. The daily dose was 75 grains, and even as high as 2½ drachms were used in some cases. Syr. cort. aurant. was used as corrigent. Diuretin was used mostly in cardiac dropsy (vitium cordis, arterio-sclerosis, cor adiposum), acute Bright's disease, chronic nephritis, pleuritis, tuberculosis membranæ seros. and cirrhosis hepatis.

In cardiac dropsy diuretin has proven to be an excellent, quick acting diuretic. Sometimes the dropsy did not appear to be diminished in the first few days, still the dangerous symptoms disappeared, and finally the dropsical condition was so much improved that the patients were able to attend to their business in very short time.

Somnolence, dizziness, headache, and profuse diarrhoea were sometimes observed after using this agent.

In acute nephritis, diuretin showed no action whatever; in the chronic form, especially contracted kidney, it proved a most excellent remedy. Equal good results were observed in cirrhosis hepatis, none at all in pleuritis.

Dr. Schmieden (*Centralblatt f. Klin. Med.*), has used diuretin ever since the summer of 1890 (at the Staetische Krankenhaus am Urban in Berlin), on

31 patients. All patients with one exception suffered more or less of dropsy, which appeared as œdema ascitis, hydrothorax, or other combination of these formed. The results were as follows:

In pure cirrhosis of the liver or tuberculous peritonitis diuretin failed entirely.

In chronic nephritis it proved unreliable; in some cases it was of no benefit whatever, others improved slightly.

In the majority of heart diseases diuretin proved an excellent diuretic. Heart diseases complicated with chronic nephritis showed only mediocre results, while pure heart diseases were decidedly improved; Schmieden has also noticed headache, profuse diarrhœa, and vomiting accompanying the use of diuretin.

Dr. Kress (*Muenchner Med. Wochenschr.*), reports 20 patients treated by him (at the City Hospital in Nuernberg) with diuretin—7 suffered from nephritis, 8 heart diseases, 2 pleural exudates, 2 diseases of the liver, and 1 tuberculosis pulmonalis in the dropsical stage. Kress came to following conclusions:

1. Diuretin is a true and strong diuretic.
2. Its action is direct upon the parenchyma of the kidneys.
3. It shows its diuretic action to advantage in acute and chronic diseases of the heart and kidneys.
4. It can be given continually and in large doses (2 drachms daily) without showing dangerous symptoms.

ERYSIPELAS AND EMPYEMA.—Dr. Spaeth (Esslingen) observed three cases which apparently had some connection to each other. The first case was that of facial erysipelas, followed by empyema; the second, a pure empyema without complications; the third, empyema followed by erysipelas. Spaeth thinks that all three cases were due to the same cause, meaning that one and the same micro-organism caused all three diseases. (An examination of the pus with the microscope should have settled this question.—*Marcus*.)

—*Wuertemb. Med. Correspondenz Bl.*

ABORTIVE TREATMENT OF SMALL-POX.—Dr. Gustave de Paola, in his article in the *Archiva Italiana di Pediatria*, reports two cases of true small-pox which were aborted through the medium of vaccination. He speaks very highly of the practical value of such treatment, and puts the most favorable period for vaccination in such cases during the beginning of the eruption; during the suppurative stage such treatment would bring less favorable results.

[His experience shows the truth of the opinion that vaccination during an attack of small-pox is positively harmless and cannot have any evil consequences.

—H. D. M.]

VARICELLA AND VARIOLA.—Dr. Hochsinger (Vienna) reports a case of varicella in a boy ten years old. An older brother (thirteen years) and the mother fell sick twelve days after the first boy showed signs of sickness. The older brother became also varicellous, while the mother fell ill with a bad attack of variola. Hochsinger says that this proves that varicella and variola are identical. He is positive that the mother could not have been infected any other way than through the son. All these were vaccinated—the boys twice, the mother three times—and always with success.—*Muench. Med. Wochenschrift*.

[Could there not have been a mistaken diagnosis, and the disease been, instead of varicella, varioloid?

—H. D. M.]

CYSTITIS.—

R.—Aq. camphorici. gr. 8.0=3ij.
Glycerini " 50.0=3iiss, gr. xxx.
Aquæ dest. " 450.0=3xiv.

M.—S. Inject into bladder.

—*Internat. Klin. Rundsch.*

LARYNGEAL ULCERS.—

R.—Aq. camphorici. gr. 0.5-3.0=gr. viiss-gr. vl.
Sacch. lactis. " 25.0=3vi, gr. xv.
Cocain. mur. " 0.1-0.25=gr. iiss-gr. iiiss.

M.—S. Dust over ulcers.

—*Ibid.*

CONSTIPATION.—

R.—Apoli puri cryst. gr. 1.50=gr. xxiiss.
Ol. ricini " 100.0=3ij, 3j, gr. xl.
Ol. menth. pip. gtt. 2.0=gtt. ij.

M.—S. Three to four tablespoonfuls daily.

—*Ibid.*

R.—Apoli puri cryst. gr. 0.25=gr. iiiss.
Butyri cacao " 2.0=gr. iij.

M.—F. suppositor. dent. tal. dos. No. x.
S. Rectal suppositories.

—*Ibid.*

MIGRAINE.—

R.—Auri monobromati. gr. 0.06-0.12=gr. j-gr. iiss.
Sacchar. lacti. " 5.0-10.0=3j, gr. xv-3ij, gr. xxx.
M.—F. p. div. in dos. No. xx.
S. One powder twice daily.

—*Ibid.*

RHINO-PHARYNGITIS.—

R.—Alumin. acet. tartar. gr. 25.0=3vi, gr. xv.
Aq. dest. " 75.0=3ij, 3ij, gr. vl.

M.—S. One tablespoonful to a quart of water; to draw up the nose.

—*Ibid.*

A NEW ANÆSTHETIC.—Prof. v. Mering has succeeded in discovering a new anæsthetic, which he calls "Pental," on account of its composition ($\text{CH}_3\text{CCHCH}_3$). This drug resembles ether, being equally as volatile and inflammatory. The patient is anæsthetized by holding a handkerchief or cloth, on which pental is poured, over the face. Experiments have shown that about 5 drachms are sufficient to produce anæsthesia, which state lasts only for three to four minutes; this drug being, therefore, only adaptable in minor surgical operations. The advantage of this drug lies in the absence of all after-effects. It does not cause vomiting, headache, nor does it interfere with the respiration or heart-beat.

—*Wiener Med. Presse.*

Medical News and Miscellany.

DR. WAUGH is about to remove to Chicago, and desires to dispose of his practice. If any of our readers contemplate a removal to this city, they may find it to their advantage to communicate with him.

SOME of our readers may remember "Technics," and those that do will be glad to know that Charles Everett Warren has come back into the journalistic field. This time it is the "*Bulletin of the Medical News Bureau*." Issued every day. Price, postage free, 25 cents per month; \$2.50 per year. Brevitas et veritas." The bright and snappy little notes that characterized "Technics" are seen in the *Bulletin*. We give the new-comer a hearty welcome. |

T. V. FITZPATRICK recommends insufflations of aristol for epistaxis.—*Lancet-Clinic*.

INFLUENZA is said to be raging in Prussian Poland, and to have penetrated as far as Berlin.

JAVAL says that Jews frequently suffer from diabetes and eczema, but epilepsy and insanity are rare among them.

BORDIER proposes to inject negro blood into the veins of unacclimated white persons who contemplate a visit to the yellow fever zone.

"DR." C. S. SMITH, of Olympia, Wash., is shown, by papers found at his death, to have been a defaulting county treasurer, from Iowa, named Thompson.

THE proceeds of the Charity Ball, in January, are to be divided between the Maternity Hospital, Gynceean, Southeastern Dispensary and Oral School for Deaf Mutes.

THREE men were arrested in Philadelphia, last Friday, for stealing from doctors' offices. Among their victims were Drs. Quill (?), C. H. Willets, J. J. Jones, Hudders, and H. Willets.

The Prescription is to be enlarged to the size of ordinary medical journals, we are sorry to learn. At present it is one of the few journals that can be handily slipped into the pocket.

THE Secretary of the State Pharmaceutical Board has arrested a druggist at Sixth and Race streets on the charge of selling adulterated drugs. His laud-anum was condemned by Prof. Leffmann.

DR. GEORGE H. WATERS committed suicide, at 465 N. Sixth street, Philadelphia, on November 12. Dr. Waters graduated at Jefferson College in 1845, but went over to the homœopathic ranks.

WEIR MITCHELL says it wasn't the water that gave the Congress of American Physicians, at Washington, such a diarrhoea, but an epidemic that was felt along the Atlantic slope as far as Newport.

IN addition to their political disabilities and the mean way in which nature has debarr'd them from throwing stones, women suffer under the further infliction of being twice as prone to cancer as men.

THE reformed inebriate who wrote the gorgeous advertisement for Keeley in the *North American Review*, a few months ago, fell from grace, after nine months' probation, and died from the effects of a carouse.

Two of the faculty of the Medical College of Indiana having resigned, brought suit against the corporation. The court has decided that the plaintiff's have an interest in the property of the college, and has appointed a receiver.—*Indiana Med. Jour.*

TWENTY butchers were arraigned before a Philadelphia magistrate last Tuesday, on the charge of selling unwholesome meat. The penalty is a fine not over \$100, or six months imprisonment, or both. Bob veal and rotten sausage appear to be the most general offenses.

"DR." IRA RICHMOND is said to be in trouble in Brockton, Mass., on account of criminal malpractice. In his trunk was found a complete counterfeiter's outfit. His name does not appear in the medical directories, and his title of "doctor" may be considered as spurious as his money.

THE erudite editor of the *Medical Record* has been making an exhaustive study of the feminine knee, from which he concludes that the anatomical variation from the masculine type is such as to render its owner unfitted for some masculine pursuits. The patella is smaller in front, and the articular surfaces of the tibia and femur are narrower. This renders it evident that women cannot succeed as doctors.

DR. HELENE DRUSCHKOWITZ, one of the first women in Austria to acquire the title of Ph. D., became suddenly insane a few days ago in Vienna. The unfortunate woman was graduated from the University of Zurich when only twenty years old. She has writted a number of literary, historical and critical essays, and was a woman of considerable learning. She was not physically strong enough, however, to stand the strain of constant work and study.

DON'T JOKE WITH THE DRUGGIST.—A prominent retail druggist of Hot Springs was the victim of a practical joke at the hands of a half-dozen friends. The young men claimed a "treat" as a compromise and fell into line at the soda fountains. The druggist saw his chance for revenge and smilingly supplied each one with their special flavor, to which he had added a good, double-dose of syrup of figs. Jamaica ginger, blackberry cordial and other similar remedies were in demand all the following day.

—*Meyer's Druggist*.

LAST Thursday was donation day for the Polyclinic Hospital, and also for the Germantown Hospital. The value of these donation days is greatly weakened by their number; each city hospital having one or two annually. Great benefit would result if the hospitals would combine on a hospital Saturday and Sunday, as is done in London and in New York. It would be better to appeal to the benevolence of the public once only, and ask it to make that appeal effectual by liberal contributions. As it is, people are actually afraid to give to a single charity, because they are likely to be besieged by the agents of a dozen others. By making an annual appeal, and by making it general, in the name of "sweet charity," and not of any single institution, many would feel free to contribute liberally, and all would be alike benefited.

A LARGE FEE.—The largest fee I ever got, writes Dr. Parker, in the *Virg. Med. Monthly*, was from an Irish girl, eight years old, whose sister, sixteen years old, was lying ill with pneumonia. She was the daughter of a poor widow. There were two smaller children, and by the labor of this sixteen-year-old daughter the family got bread. I told the mother my fears, which it seems the eight-year-old child overheard, and dreadful alarm filled her breast. She waited on the sister with greatest tenderness, and the smaller children were kept quiet and orderly. I promised to call again late at night. It was dark and rainy. Fears and forebodings increased with the surrouning gloom. The eight-year-old girl could not stay in the house, but, in spite of the cold, remained outdoors watching for my coming. When, peering through the darkness, she caught sight of me she exclaimed, with an emphasis and heartfelt earnestness that thrilled me through and through, and I shall never forget, "Thank God, here comes the doctor!"—a prayer of thanksgiving that went as straight to heaven as that of a sainted prophet or priest, and I felt that even my name had been mentioned and honored in the courts of heaven.

WEEKLY Report of Interments in Philadelphia, from November 7 to November 14, 1891 :

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Abscess of lung.....	1			Fever, malarial.....	1	2	
Aneurism of the aorta.....	1			" scarlet.....		9	
Alcoholism.....	2			" typhoid.....	9		
Apoplexy.....	10	1		Hernia.....	1	8	
Asthma.....	1			Inanition.....	1		
Bright's disease.....	15			Inflammation bladder.....	1		
Burns and scalds.....	1			" brain.....	2	7	
Cancer.....	8			" bronchi.....	3	3	
Casualties.....	8			" kidneys.....	2	2	
Congestion of the brain.....	2	3		" liver.....	22	16	
" lungs.....	1	2		" lungs.....	1	1	
Childbirth.....	1			" pericardium.....	2	2	
Cellulitis.....	1			" peritoneum.....	3	3	
Cholera infantum.....	3			" s. & bowels.....	1		
Cirrhosis of the liver.....	4			" tonsils.....	1		
Consumption of the lungs.....	3	2		Intussusception.....	1		
" throat.....	1			Marasmus.....	1	10	
Convulsions.....	13			Neuralgia of the heart.....	1		
Croup.....	17			Obstruction of the bowels.....	2		
Cyanosis.....	1	5		Old age.....	17		
Debility.....	1			Paralysis.....	9	2	
Diabetes.....	1			Poisoning, chloral.....	1		
Diphtheria.....	28			Rheumatism.....	1	1	
Disease of the heart.....	24	2		Septicæmia.....	1		
" kidneys.....	1			Stricture of the œsophagus.....	1		
Drowned.....	1			Suicide.....	2		
Dropsy, abdominal.....	1			Teething.....	1	3	
Dropsy of the chest.....	1	1		Tumor of spleen.....	1		
Dysentery.....	2			Tumor, uterine.....	1		
Effusion of the brain.....	1	1		Uremia.....	3		
Embolism, cerebral.....	1			Whooping cough.....	1	4	
Epilepsy.....	4			Total.....	238	153	
Enlargement of the heart.....	1						
Fatty degeneration of the heart.....	1						

DR. ELMER E. HORN (Medico-Chi., 1889) is to marry Miss Lulu Williamson, of Salladasburg, Pa., on December 5.

WOMEN DO NOT LIKE WOMEN AS DOCTORS.—Knowledge of a certain kind has done nothing for women; the women doctors do not compare, so far as getting people well goes, with a good old nurse, or, what's better still, a mother. My experience has taught me that no woman doctor can cure a pain under the apron better than an old colored mammy, who will give you a proper dose of paregoric and put hot salt bags on the place where the pain is, and sit and smooth your hands until you go to sleep. I wouldn't let a woman doctor experiment on my fox terrier; I know what suits him, and I can give it to him myself. Women have always known you could rub away a pain; they have always known the advantages of heat for simple ailments, and when they have tried all these they then want a man to fall back on.

—"Bab," in *The Times*.

DR. G. W. VAN VLECK, graduate of the Eclectic Medical College, of Philadelphia, 1854, was arrested in Cincinnati, November 15, for "issuing bogus diplomas for money, permitting the holders to practise medicine. The institution which issued the diplomas, and of which Van Vleck is the President, has held a charter for nine years, and has existed in secret during that time. It was known as the Medical University of Ohio. It has no building, and no lectures are given.

"It is not known how many diplomas were issued in this manner, but it has been learned that burial permits have been issued by persons holding such diplomas. Van Vleck's charges for a diploma vary from \$500 down to a few dollars. The reporter making the investigation obtained a diploma for a small sum. Van Vleck was released on \$1,000 bail."

—*Pittsburg Dispatch*.

EXPERT engineers are working upon the drainage problem in connection with the Exposition grounds at Jackson Park. As a result of calculation in the Construction Department, a somewhat new plan will be adopted for taking care of World's Fair sewage.

All the offal, conveyed through underground pipes, will run into four large tanks at the southwestern portion of Jackson Park. These tanks are to be thirty feet in diameter and forty feet deep. The novel feature connected with the plan is that the sewage deposited in the tanks is to be treated chemically, and the Construction Department believes that the water flowing from them after the chemical treatment will be almost pure and wholesome. So far as is known a similar treatment has never been adopted, except at Berlin, Germany. There the method has been found to work with satisfaction. If equally successful at Chicago the waters of the lake will not be polluted by the drainage from the Exposition grounds.

THE Polyclinic Course of Evening Lectures will be given on Tuesday and Friday evenings of each week, at 8 o'clock, in the new Polyclinic Hospital, Lombard street above Eighteenth street.

November 24.—Dr. Edward Jackson, "The Shadow Test."

November 27.—Dr. B. Alex. Randell, "Ear Diseases in General Practice."

December 1.—Dr. S. D. Risley, "The Diseases of the Choroidal Tract."

December 4.—Dr. John B. Deaver, "The Operative Treatment of Head Injuries."

December 8.—Dr. Henry Leffmann, "Recognition of Albumose and Peptone in Urine."

December 11.—Dr. Edward P. Davis, "The Use of the Forceps."

December 15.—Dr. Henry Leffmann, "Determination of Sugar and Urea in Urine."

December 18.—Dr. S. D. Risley, "The Diseases of Choroidal Tract."

December 22.—Dr. John B. Roberts, "Fractures of the Elbow."

January 5.—Dr. J. Henry C. Simes, "Syphilis."

January 8.—Dr. Lewis H. Alder, Jr., "The Physical Exploration of the Rectum."

January 12.—Dr. Arthur Van Harlingen, "The Contagious Diseases of the Skin; Their Diagnosis and Treatment."

January 15.—Dr. John B. Deaver, "The Radical cure of Hernia; Umbilical, Inguinal, and Femoral."

January 19.—Dr. J. Henry C. Simes, "Syphilis."

January 22.—Dr. H. Augustus Wilson, "The Mechanism of the Normal Foot With Reference to the Correction of Deformities."

January 26.—Dr. Arthur Van Harlingen, "The Antiseptic Treatment of Skin Diseases."

January 29.—Dr. Lewis H. Alder, Jr., "Congenital Malformation of the Rectum and Anus."

February 2.—Dr. E. P. Davis, "The Treatment of Delayed Labor."

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Original Articles.

ADDRESS ON DIPHTHERIA.¹

By O. W. BRAYMER, M.D., M.A.,
CAMDEN, N. J.

THE subject we have chosen for discussion to-day is of great importance to us as practitioners of medicine, both because of its fatality among children and adults, and especially because statistics show that it is increasing, both in quantity and severity, among our population. In the year 1890 at the Health Department, in the City of Camden, two hundred and seventeen cases were reported with fifty deaths. Up to November 1, 1891, that is during the first ten months of this year, there have been reported four hundred and eighty three cases, with one hundred and forty-two deaths; two hundred and sixty-six more cases than for the whole of 1890. And the death-rate is six per cent. higher this year than last, being in 1890 twenty-three per cent. and a fraction. While thus far in 1891 it has been twenty-nine per cent. and a greater fraction.

Now, since the sanitary surroundings do not seem to be at all improved, we must expect even more of the disease to fight against before the winter is very far advanced.

The cause of all this is undoubtedly due to improper drainage and surrounding hygienic conditions, particularly among the more filthy of our inhabitants.

The Loëffler bacillus is now, we believe, accepted by the great body of medical men and bacteriologists as the specific cause of this disease. Cases which have heretofore contradicted this view, must be ac-

cepted as ulcerated sore-throat, pseudo-diphtheria, or what might be better, let all such come under the head of diphtheroidal disease.

These are caused by various microbes, and have a tendency to remain local, seldom, if ever, giving any systemic effects or sequelæ.

We have in diphtheria a highly contagious disease, especially among children, which, whether it appears in the mild or more severe types, must always be dreaded, both because of its loathsomeness and fatality *per se*, and on account of the paralysis which may suddenly take place after the patient is apparently out of danger, and rapidly end his life.

It has been found, upon examination of membrane from the infected parts, that the specific bacillus does not extend through the entire thickness of the exudation; but the chemical products of these bacilli, or ptomains, when absorbed into the system, destroy the red blood corpuscles, and give rise to the grave constitutional disturbances, which are present in so many cases.

Therefore, it is concluded, that we have a primary local disease to treat, and we can readily see the prime necessity of early treatment in individuals supposed to be infected, and it is evident that early local antiseptic treatment of both the patient and all members of the household will be of the greatest benefit. This will keep parts liable to be infected comparatively impregnable to the assaults of the bacilli.

In the first place, when a deadly infection of this character appears in a community, the public should be put on their guard so that they may not run, without warning, into polluted places.

All houses containing infected persons ought to be placarded. This should be as compulsory as reporting the case to the Board of Health.

This is done in some of our large cities by fastening on the front door, or in the window, a card with let-

¹ Delivered before the Camden County Medical Society at its Ninety-first Semi-Annual Meeting, November 10, 1891.

ters large enough to be read from a distance, stating the name of the disease. These cards should be furnished by the Boards of Health, and a fine should be imposed if they are not hung out within a reasonable period of time, say three or four hours after the nature of the malady has been established; and if at any time there is doubt in the diagnosis, let the public have the benefit by warning them of the supposed danger within.

Boards of Health should be very prompt in looking into the sanitary conditions of all infected houses and communities, because delay in any case means the spread of sorrow, and, perhaps, death. All drains and cess-pools should be thoroughly disinfected; all houses should be fumigated at once with the fumes of burning sulphur, or with chlorine gas. This done, free ventilation must be established, and our patient isolated and kept in bed. The well members of the household must be put on a course of prophylactic treatment, to reduce the spread of the contagion to the minimum.

Stores and all places of business should always be closed when any person in the house is sick with this disease. This should be rigidly enforced by every health board. The evil from neglect of this has come to our notice during the past few months, where, in a family who kept a candy and notion store, patients died with diphtheria, and at all times the doors were open and children were allowed to go and come as they pleased. Several caught the contagion by this means.

Domestic animals, such as dogs and cats, should not be allowed in the house at all, as in many instances these have been known to contract the disease and carry it from place to place. And, indeed, fatal forms of diphtheria have been contracted from chickens, which, perhaps, had fed upon the refuse from some sick chamber.

Great care should be exercised in the disposition of all clothing and bedding from the sick-room. Certainly they should not be hung in the back yards to spread contagion among the neighborhood, unless they have been previously sterilized by thoroughly boiling or steaming.

Were these details properly looked after by the health authorities, many valuable lives could be saved.

In case of death, the body should be at once wrapped in antiseptic blankets and buried without delay. After death or recovery the sick-room, and everything within, should be subjected to sulphur fumes or chlorine gas; floors should be scrubbed, walls freshly repapered or whitewashed, and the woodwork repainted. In thorough cleanliness is found the only safety.

In the way of treatment for out patient: First, isolate him in a well-ventilated room, free from all carpets, draperies, and superfluous furniture.

The next in order is to look out for a competent nurse. If the means of the family will not allow of a regular or trained nurse, certain members—in whose judgment the physician can rely—should be designated to look after all the patient's wants. This establishes order in giving medicines and nourishment, and also keeps a part of the family, to some degree, at least, free from the contagion.

Every article coming from the patient's room should be disinfected before being used by any other member of the household.

The patient's diet should consist of milk, eggs, and broths, together with brandy, which is always indicated early in the disease.

In the nature of medicinal treatment, local antiseptics, internal antiseptics, and tonics are of the first importance. In the beginning of all cases the mild and corrosive chlorides of mercury should be given, in moderate doses, until the system is well under their influence; and good results are obtained by continuing the bichloride throughout the disease. Also, sprays and gargles of this antiseptic, in proper strength to suit the nature of the case, give excellent results if used early.

Recently we have successfully treated several cases of this disease by exposing large quantities of chloride of lime in the room, and believe the inhalation of the free chlorine had a beneficial effect, as some of these which began as very malignant did exceptionally well from the start.

In the free use of pineapple juice we have the benefit of a vegetable pepsine or solvent of membrane, which acts favorably on the exudation, and good results are undoubtedly obtained from the same. Peroxide of hydrogen, when used freely, keeps the parts clean, and is an excellent adjunct to the other antiseptics. When the patient is old enough to be controlled without a struggle, which exhausts him, it is well to touch the visible membrane and inflamed parts with a piece of absorbent cotton, wet in a solution of bichloride, tincture chloride of iron and glycerine.

A local treatment, which is gaining in favor at the present time, is to inject aquæ chlori under the exudation. This seems to be a rational undertaking, and those who have used it find that, when used early, it prevents the further development of the bacilli.

For internal remedies, further than calomel and bichloride, iron, chlorate of potash, quinine and strychnine, together with plenty of alcoholic stimulants and nourishing food, are those that can be depended upon with the most certainty.

To spray the nasal passages, whether or not infected, with a clean spray is, no doubt, a wise procedure, as this keeps these parts comparatively free from the contagion, if it has been done before the exudation has commenced to form.

In laryngeal diphtheria, further than the treatment outlined above, steam inhalations of lime water will be found very useful. If the glands of the neck are enlarged apply warm flax seed meal poultices. In laryngeal diphtheria an emetic does good if the patient is strong enough to bear it, but care must be especially used here or we will lose our patient from exhaustion. Of course in severe cases tracheotomy or intubation are the only reasonable resorts we have for relief; but if these are refused by the family an emetic should then be employed at any risk to give one more chance for life.

Patients convalescent from this disease should be under the care of the medical attendant sometime after the local trouble has subsided, and every means should be used to, if possible, prevent paralysis. Which is so prone to follow, and may end life so suddenly when striking a vital part.

To conclude: Careful antiseptic and tonic treatment, together with the best of nourishment and nursing, is all that can be done for diphtheria with our present knowledge of its pathology.

But in this, as in other of our contagious diseases, a new treatment seems to be on the horizon of discovery. Bannatyne, in the *Glasgow Medical Journal* for September, 1891, tells of good results that he has obtained by treating diphtheria with injections of erysipelas albumose. In this we have a battle

between microbes, and this is the method that, no doubt, will be eventually accepted as the true treatment of all contagious diseases caused by specific bacilli, such as tuberculosis, diphtheria, cholera, scarlet fever, etc., etc.

By vaccination small-pox has been robbed of its fatality.

Pasteur has relieved hydrophobia of its horror, and when the bacilli which cause our contagious diseases are better known, and as their actions are better understood, so soon, we believe, will there be a revolution in the treatment of this form of disease.

Chemicals that act on bacteria with such violence that they at times endanger life, will be set aside, and in the new era of medicine, which is near at hand, no doubt the bacteriologists will give us known strengths of antagonistic bacilli, so that all we shall have to do after determining the specie and characteristics of the invading microbe will be to inoculate with its antagonist, and at once the opposing forces will annihilate each other, and the patient will be free from the disease. That learned discoverer, Koch, and his colleagues made a great mistake by allowing the public to induce them to publish the results of their investigations with tuberculosis before they were completed. But failure does not destroy the virtue of their theory. They are certainly working in fields ripe for the harvest, and either they or succeeding bacteriologists will surely garner golden grain.

THE ASEPTIC CLOSURE OF LONG STANDING SINUSES HAVING THEIR ORIGIN IN TUBERCULAR JOINTS.¹

By AUGUSTUS WILSON, M.D.,

Professor of General and Orthopedic Surgery in the Philadelphia Poly-clinic and College for Graduates in Medicine; Clinical Professor of Orthopedic Surgery in the Woman's Medical College of Pennsylvania; Clinical Lecturer on Orthopedic Surgery in the Jefferson Medical College of Philadelphia.

RECOGNIZING the very extensive character of this subject, I have avoided elaborate details and arranged the paper more in the form of a summary based upon modern aseptic practice, so that it should not occupy more time than is allowed for reading of papers. The class of cases that it is the purpose of this paper to discuss, embraces a very large range of chronic runners from one hospital to another. They are usually designated as incurable or hopeless, and, as a consequence, subjected to the so-called palliative or expectant plan of treatment, attention being largely confined to medication.

It occasionally happens that spontaneous resolution and closure of sinuses or fistulae takes place, but this is the exception, the rule being that they continue patulous for a long time, often during the entire life of the patient. The well-recognized and thoroughly established fact that, so-called cold abscesses frequently undergo absorption when unopened, would seem to indicate the advisability of favoring such absorption by a closure of the openings that may have occurred from over-accumulation.

The causes of these sinuses may be sought in a tubercular deposit in a bone or joint, or in the soft structures that surround a joint, which has formed a cold abscess, caseation and decomposition taking place, rupture follows. Part of the contents of the sac escapes and a sinus remains for a long period of years to act the part of a sewer-pipe.

When rupture does not take place spontaneously, it is apt to be induced by the evacuation of a cold abscess by an aspirator, for in this procedure it rarely occurs that the entire deposit is removed because it is not of the nature of a fluid. In the closure of the skin-wound made by the aspirator, the cicatrice is only superficial, and the subsequent spontaneous rupture is therefore facilitated at the site of puncture.

Likewise after incision, when the contents of the sac are thoroughly removed, the too-long continued use of the drainage tube, or in some instances its use at all produces a sinus by the separation of tissues that would otherwise granulate. This sinus has not only no tendency to close, but the oft repeated injections for the purpose of rendering the parts aseptic interferes with any granulation process that may have been commenced. In these ways sinuses are formed which persist, although often subjected to prolonged medication because of the supposed danger to the patient of any radical attempt at closure.

The teaching of Gross is still observed. "When the fistule has been of long standing, and has acted all along as a drain upon the system, serving perhaps to counteract some other affection, such as phthisis, or a tendency to apoplexy, no operation should be practised, since it could hardly fail to provoke mischief; in fact, serious organic disease of any kind is a contra-indication to an operation. The only exception to this is where the fistule is a cause of excessive local distress, completely depriving the patient of sleep, appetite, and comfort. Under such circumstances the surgeon could hardly refuse his aid, but before doing this, he would be sure to open a new course of counter-irritation, in the form of an issue or seton, in some other or more eligible portion of the body, thus establishing a drain at least equal to that which he is about to suppress as a means of temporary mitigation.

In marked contrast is the modern teaching, for since the above was written in 1872, the adoption of aseptic methods has made it possible to reverse entirely the plan of procedure.

It is often best to consider a tubercular focus to be a malignant growth tending to increased destruction if undisturbed. While it is not malignant *per se* in the sense of malignant tumors tending to the death of the patient, radical measures will more frequently and successfully be resorted to if this view is kept in mind in preference to its harmless character.

The freedom from disastrous results, in fact, the satisfactory recoveries obtained in excisions of tubercular hip disease, knee-joint involvements, and even when vertebrae are attacked, all tend to urge the adoption of this plan of procedure in the early stages of the disease to limit the extent of the excision to the minimum.

Excision is not confined to early stages, but is as well adapted to conditions where the necrosis is very extensive and is a procedure now well established, but it not infrequently happens that a sinus follows which could have been avoided by recourse to methods to be alluded to later.

The vicious character of the infected parts tends to their non-union, and every means that can safely be resorted to for the complete closure of long-standing sinuses should be resorted to.

The great difficulty that is experienced of tracing a sinus after the parts have been laid open may be met in two ways. Prior to opening the sinus a probe may be introduced to the furthestmost part and allowed to remain as a guide.

¹ Read before the Philadelphia Academy of Surgery November 2, 1891.

The injection into the sinus and cavities in connection therewith of some coloring matter which will be innocuous, and at the same time so stain the lining membrane that its discernment and quick removal may be facilitated. I have found that a solution of pyoktanin meets the indications efficiently, for it possesses germicidal properties, and the greatest objection to its more general use is here its highest recommendation, for its purple color stains the tissues with which it comes in contact, thereby clearly indicating the tissues that it is desirable to remove. The object to be sought is the entire removal by clean incision of all of the stained tissue or lining membrane of the sinuses, and when the site of the original tubercular deposit is reached to excise it completely.

The laceration of tissues by tearing as a result of the use of an ecrasur or dry dissector or handle of a knife tends to sloughing, and the necessity of providing an outlet by drainage tube, the avoidance of which is of considerable importance.

The infection of freshly incised tissue by the bacillus tuberculoza may be avoided by the free use of irrigation of sterilized water, or solution 1 to 2,000 bichloride of mercury during the progress of the operation and the efficient use of iodoform before closure.

It not infrequently happens that a suspected bone origin to a sinus is found upon laying open the parts not to exist, but that the tubercular deposit is confined to soft structures and its ready removal easily accomplished.

In cases where a bone is found to be involved, the removal of the necrosed or diseased part should be done by a chisel, to the end that only normal tissue be allowed to remain. The process of superficially scraping is inadequate for the entire removal of the diseased tissues, and by its laceration does not conduce to healthy cicatrization.

If one or more contiguous bones are partially involved, the entire removal of such bones or of the joints is not essential, but only of such parts as are involved. To let the sinuses alone, or to continue the expectant plan of treatment, means a continuance of the annoyance of dribbling pus, positive discomfort, and a constant menace to the general health with but slight tendency towards recovery.

The constitutional disturbance depends more largely upon the exudation from the lining membrane of the sinus than from the tubercular deposit, as evidenced by the frequent freedom from constitutional disturbance in cases of unopened cold abscesses, and by the very great improvement in the general health following the successful closure of those sinuses which have existed for a long period.

The simple injection plan of treatment is usually found to be inefficient because of the mechanical difficulty of covering the entire surface of a sac by any material thrown in through a single opening, without recourse to hyperdistension. The danger of internal rupture of the sac at some weak and inaccessible point by hyperdistension is very great, and when this does take place not only the material injected is thrown outside of the sac, but a new field of absorbent vessels is exposed to infection of bacillus.

A vent hole or counter opening at the opposite side or furthest end of the sac or sinus avoids the danger of rupture and acts like a check valve, enabling the operator to command the quantity of material injected as well as the force of the flow.

Sinuses of great length may be closed by stages where the discharge is considerable by substituting an opening nearer the focus, thereby diminishing the constitutional effect of exudation from the greater

surface and the portion between the openings completely closed. In turn, this may often be still further shortened, until finally a complete closure is accomplished.

The danger of stitch wound abscess and the unsightly transverse cicatrices, which is very considerable in these cases, may best be avoided by having the sutures embrace only subcutaneous tissues, bringing the needle out through the edge of the incision and not through the skin. By this means deeper union is induced and the possibility of any gaping of the skin is avoided by the use of collodion-saturated gauze covering the incision.

Iodoform is pre-eminently a germicide for bacillus tuberculoza, and it is of great value in making it possible to seal the wound. The form most satisfactory for use in these cases being a 10 per cent. emulsion in freshly-boiled olive oil. The dry powder may be used, but its even distribution is difficult to accomplish and the crevices are not reached. The ethereal solution has been found objectionable, on account of its too rapid absorption and the danger of iodoform intoxication.

The resort to packing with lint or other substance for the purpose of keeping the skin wound open and to induce granulation from the bottom, as well as the use of any kind of drainage, are generally unnecessary and often positively harmful, in favoring a continuance of the sinus.

If the parts are cleanly incised and maintained in close approximation, primary union may be expected throughout, and, if only healthy tissue be allowed to remain, drainage need not be employed. Occasionally it may be deemed expedient to use drainage for the first twenty-four hours, in cases where the pus continues to flow from inaccessible points, but its continued use is disadvantageous.

The procedures to be adopted may best be considered if the conditions are grouped as follows:

1. Those sinuses in connection with accessible joints where the tubercular deposit can be safely removed.
2. In similar positions, but where its removal cannot be safely accomplished.
3. Sinuses from inaccessible deposits.

Under the first heading, sinuses in connection with accessible joints, where the tubercular deposit can be safely removed, the modern plan of procedure is self-evident. Under strict asepsis, or chemical antiseptics, the focus should be removed in its entirety, leaving only healthy tissue behind. The cavity of the sinus denuded of its lining membrane by clean incision, in preference to tearing or scraping, and the entire cavity of the sinus and of the site of the former deposit rendered aseptic by thorough washing with peroxide of hydrogen, followed by irrigation of 1 to 2,000 bichloride of mercury, and, finally, the entire surface covered with iodoform emulsion. The parts are then to be brought into coaptation by subcutaneous sutures; iodoform dusted over incision; collodion gauze; finally, hermetically sealing the wound. Gentle but firm pressure with aseptic gauze and bandages complete the dressings.

II. Where the sinuses are in connection with accessible joints, where the removal of the tubercular deposit cannot be safely accomplished.

In these cases, as, for example, in hip disease, when the ilium has become denuded or involved, or in the lumbar vertebrae, it has been found judicious surgery to cut away all that could safely be removed, washing the parts as thoroughly as though the entire removal had been accomplished, as referred to

under the first heading, and sealing the wound as described.

It will be expected that new cold abscesses will form from the unremoved unhealthy tissue, necessitating reopening, and the probability of this should be placed before the patient, so that at the very first indication of the necessity, the former procedure should be repeated. The relief afforded by a cessation of the annoyances of the sinuses will more than compensate for the possibility of repeating the operation, nor is it certain that repetition will really be necessary.

III. Where the sinuses have their origin in inaccessible deposits—for example, when the bodies of the dorsal vertebræ are involved—it is often clearly impossible to lay open the sinus or reach the site of deposit, and recourse must, therefore, be had to other but less satisfactory means.

In most of these cases, the sinus only can be considered, and remedial measures must be confined to injections to render the parts thoroughly aseptic. A counter-opening, when practicable, greatly facilitates the accomplishment of the desired end—in fact, is often really indispensable. The closure of the sinus may be facilitated by excising as much of the outlet as possible, so as to procure union to a greater depth than by simply closing the skin opening. Both openings being closed, pressure is to be relied upon to close the sac. It is possible that in the attempt to eradicate the bacilli and effects from the sinus that the injected germicide may reach the site of the deposit, and act directly upon the focus, in which case the permanent benefit will be great.

In the cases upon which I have thus operated I have had no re-opening, or constitutional or other disturbances follow, but the time that has elapsed since the operations were performed is entirely too short to afford any indication of the permanence of the results obtained.

To have closed and kept closed for a year a sinus of the hip-joint of twenty-three years' standing is enough encouragement for a continuance of the method. To have removed a drainage-tube from a knee that had been in constant use for eighteen months, the sinus having been daily subjected to washing, and new external dressings employed to catch the pus that should not have been allowed to continue to flow, and to have closed the sinus and have it remain healthy for nearly six months, is also encouraging.

It is my purpose to detail the results in these cases when sufficient time has elapsed to warrant the statement that they are permanently benefited. The full purpose of this paper will have been met if it assists in any way in the judicious treatment of a most troublesome class of cases.

1611 SPRUCE STREET.

DIPHTHERIA.¹

By DANIEL STROCK, M.D.,

Surgeon to the Cooper Hospital; Lecturer on Dietetics in the Camden Training School for Nurses; Member Executive Council of the New Jersey Sanitary Association; Ex-President Camden City Medical Society, etc.

IN acceding to this society's request to prepare a paper upon the subject of diphtheria, I feel that I have been assigned a topic to the importance of which I cannot do justice.

While disclaiming to assume the rôle of an alarmist, truth compels the statement that this disease which has been so prevalent and fatal in Camden during the past year is still scourging our city,

¹Read before the Camden (N. J.) City Medical Society, November 12, 1891.

and the indications at present are that with the onset of cold weather there will be an increase in the number of cases. Therefore the consideration and discussion of this subject is opportune; and, no doubt, we will all be benefited by an interchange of views and experiences.

The scope of this paper does not involve the study of the history of this disease; as physicians we are chiefly concerned with the cause, prevention and treatment.

Diphtheria has prevailed for several thousand years with more or less virulence, and, as a natural consequence, much controversy has been waged in considering the question of its cause, and whether or not it is primarily a local or constitutional disease. Without entering into the various theories that have been advanced from time to time, we may now without hesitation assert that the cause of true diphtheria is a specific germ, called the bacillus diphtheriæ. Dr. Loeffler, a German investigator, has the honor to have been the first to isolate and differentiate this bacillus, which he did in 1884. Since that time many other searchers after the truth in various parts of the world have made independent investigations, and have fully confirmed the opinion expressed by Loeffler.

The only confusing point in these investigations has been the association with the Loeffler bacillus of a streptococcus apparently identical with the streptococcus pyogenes and streptococcus erysipelatus, and a number of cases of diphtheria have been observed wherein the above mentioned streptococcus has been nearly constantly present. "These forms of so-called diphtheria are most commonly associated with scarlatina, measles, erysipelas and phlegmonous inflammation, or occur in individuals exposed to these diseases; but whether exclusively under these conditions is not yet fully established." Loeffler says: "That the chain-forming micrococcus can cause a disease similar to diphtheria, when it enters the pharynx and spreads toward the lungs in the tracheal lymph channels, I consider very probable." And he says further: "On the whole, we are abundantly justified in the assumption that in a certain class of cases, at least, diphtheria is caused by a streptococcus having the character set forth above."

Thus, while a streptococcus similar to the streptococcus pyogenes has been found in a certain number of cases of pseudo membranous exudation, or so-called diphtheria, yet the one germ invariably present in true diphtheria is the bacillus diphtheriæ of Loeffler, and the conclusion of various bacteriologists is that there can no longer be any doubt of its specific character. This bacillus, though always present in the diphtheritic deposits, does not invade the blood or organs, or even the affected mucous membrane.

It is also shown that the constitutional symptoms that accompany diphtheria are caused by a toxic albumen produced by this bacillus. This albumen, when injected into animals, produces the characteristic paralysis observable in human diphtheria.

Having what we may now deem to be definite information as to the cause of this disease, we are in a position to understand the importance of preventive measures, and are enabled to intelligently resort to such remedies as investigation and clinical experience have shown to antagonize the propagation and growth of the bacillus diphtheriæ.

To my mind, prophylaxis is the true and, perhaps, only sure way of combating diphtheria, after all. If we accept as true the bacillary origin of the disease, then must we acknowledge that it is *primarily* a local affection, followed later by systemic involve-

ment. But it is the *general* symptoms that first attract attention to the patient, and frequently while yet there are no signs of pharyngeal invasion. Now, if the general involvement is due to a poison generated at the seat of local lesion, we must assume that such poison had been formed *prior* to the onset of malaise and fever. If so, then there is but one conclusion to be arrived at—and that is that the bacilli were present in the nares, pharynx or larynx, and had already generated sufficient poisonous products to infect the system, *before* the characteristic exudate was apparent to ocular inspection. Thus, when we are called upon to treat the patient, what was a local, insidious affection, has now become a general, a systemic disturbance, with, perhaps, even at this stage, only slight evidence of localization. Hence, our local germicidal treatment is instituted too late to prevent general infection, although we may stay further progress of the malady. Unfortunately, the chances are that we will not prevent further advance of the disease; and we may rejoice if we save our patient.

But if we anticipate the results here depicted, and in a given case institute pre-invasion treatment, we may have the satisfaction of securing the ideal results contemplated by preventive medication.

Prophylaxis, then, includes local as well as general measures.

Local measures contemplate the use of germicidal agents, either in the form of spray or gargles, and by insufflation into the nostrils. Loeffler recommends that every healthy person should use, every three or four hours, a solution of bichloride of mercury, 1-10,000, or, what he considers better, a solution of $\frac{1}{8}$ -10,000 cyanide mercury. He also recommends chlorine water, (1-100) and thymol (1-500 and 20 per cent. of alcohol).

What we may term general prophylaxis involves supervision of the schools, both the week-day and Sabbath schools. There can be no doubt that this disease is largely propagated through the instrumentality of these agencies, where large numbers of children gather and intimately associate during the hours of study and play. As between the sexes, the relations existing between the girls of a school are more intimate than the fellowships between the boys; and herein is an element of increased danger to the girls. The reprehensible practice of indiscriminate kissing is largely in vogue in the female department of schools, and is directly responsible for the transmission of this disease in a certain number of cases. As bearing upon this point, my own experience has been that the large preponderance of school children attacked have been girls. When we consider that, after invasion, there is undoubtedly a period of local activity, without pronounced symptoms, during which the germs are elaborating the ptomaine that will subsequently infect the entire system, we can understand what a menace a child unconsciously affected with diphtheria in this incipient stage must be to her companions in a school room. During the past year I have met with a number of instances where children affected with diphtheria have passed directly from the school room to the sick bed.

Therefore, as a measure of safety to the young, in whom there exists marked susceptibility to this affection, during the prevalence of diphtheria all public schools should be closed, and what are known as the infant classes of Sunday-schools should be dismissed until such time as the disease is in abeyance. If this were done, there can be no doubt but that the progress of diphtheria in any community would be

largely controlled before its ravages had made so many homes desolate.

General prophylaxis also involves the consideration, whether or not the source of water supply is a disseminator of the disease. To a community situated as is Camden, whose portable water is contaminated with the sewage of more than a million people, this question is a vital one. We cannot delude ourselves with the belief that the emptying of large quantities of human excreta in our drinking water is unattended with danger, as the germs concerned in the production of diphtheria and certain other diseases are tenacious of life, and survive a long time in water. Therefore, all the discharges from a diphtheritic patient, and particularly that which is expectorated, should be carefully and thoroughly disinfected before it is allowed to pass into the sewer.

Isolation is another of the general prophylactic measures resorted to to prevent the propagation of diphtheria. When a case is met with in any household, the patient should be immediately removed to a room remote from the portion of the dwelling occupied by the family, if possible, and no one permitted to enter the room but the nurse. The food, drink and medicine used by the patient should be placed where it could be conveniently obtained by the nurse. The discharges should be thoroughly disinfected before they are removed from the room, and the house saturated with sulphurous acid gas, obtained by burning sulphur, with moisture, in all the rooms. These measures, joined with the thorough fumigation of the room after it is vacated, and the disinfection, or destruction by burning, of the apparel and bedding used by the patient, would tend to limit the disease in that house to the original victim.

Probably to ourselves, as physicians, the most important consideration involved in the discussion of this subject is the treatment. We all know the disease when we meet it; we understand the importance of prophylaxis; but we are not all in accord as to the treatment, because we know there is no one remedy, or a series of remedies, that we can resort to and feel assured that they are specifics. Therefore, as I have heretofore asserted, the only specific treatment of diphtheria is the treatment by prevention. If every patient could be seen in that early stage while yet there is no systemic involvement, then could we have hope that by vigorous resort to bacteriocides we would effect destruction of the germs before the elaboration and absorption of the ptomaine that causes the train of general symptoms that so frequently results in death. We have no measure of the quantity of absorption that must ensue to produce fatal effects. Experience teaches us that the apparently mild case will die of heart paralysis as well as the patient whose system seems saturated with the characteristic poison. Our local antiseptic treatment must be as thorough in the one instance as in the other; for once the general system is involved, let me repeat, there are no remedies that we can use and feel assured they will cure. The more experience a man has had in treating true diphtheria, the more readily, I am convinced, will he endorse this assertion.

Treatment must be constitutional as well as local, and general constitutional measures include recumbency and nourishment. The patient should be immediately placed in bed, and kept there until recovery is complete. When you direct that the patient must be recumbent, impress upon the nurse or the parents that you mean what you say. Recumbency must be maintained without deviation.

Nourishing the patient constitutes an important part of the management of these cases. Feed the patient systematically with a range of foods that are calculated to sustain the wasting powers of the system and combat the tendency to anæmia. The most important guide for feeding is the condition of the stomach. If food is taken with apparent relish, and is digested, the patient may have, if not too young, minced beef, beef juice, bread and milk, junket, milk, rice soup made with beef or mutton, eggs soft-boiled or poached, raw eggs in milk, gruels, etc. Various other articles of food will suggest themselves, the important point always being in mind that we must avoid the administration of food that is calculated to produce disturbance of the stomach or bowels, and thus defeat the object we have in view when we give nourishment. When the patient refuses aliment, rectal nutritive enemata should be given, consisting of beef juice, peptonized milk, beef or mutton broths, etc.

Constitutional measures also include the administration of drugs calculated to husband the strength of the patient, to antagonize anæmia, and to sustain the heart's action. Drugs exhibited with these objects in view should be given *early*—that is, they should anticipate the conditions they are designed to combat. Drugs for this purpose include iron, quinine, strychnine, and liberal quantities of alcohol. The heart tonics proper that may be used are digitalis, strophanthus, spartein, caffeine, camphor and musk.

For the high temperature that frequently occurs, antipyrine and antifebrine are sometimes used. In my judgment he is rash indeed who would use this class of remedies in diphtheria, as their specific action upon the heart must render their use a grave menace to the patient. Corrosive sublimate is considered by some to be the most important internal remedy. This drug may be given every two hours, in doses ranging from gr. $\frac{1}{75}$ to gr. $\frac{1}{15}$.

Locally, a host of remedies have been used, and it would serve no good purpose to enumerate them all. At the present time we confine ourselves to those of known germicidal and antiseptic powers, chief of which, perhaps, is corrosive sublimate. This may be used as a spray in solutions of 1–2,000 to 1–10,000. Other articles of this class are the peroxide of hydrogen, boracic acid, carbolic acid and salicylic acid.

A solution strongly recommended by Lœffler, consists of carbolic acid 3 per cent. in 30 per cent. of alcohol in distilled water. Another is alcohol and turpentine, equal parts, with 2 per cent. of carbolic acid. For the nose a saturated solution of boracic acid should be used.

Latterly the peroxide of hydrogen has largely supplanted the corrosive sublimate as a local application. It should not be used full strength, as its liability to excoriate may create new foci for the disease. The medical journals lately have contained a number of papers lauding this article as a remedy in diphtheria, and some writers have given the impression that it is almost infallible in this disease. I have used it in a large number of cases during the year, and I can say, basing the assertion upon that experience, that in a case of true diphtheria peroxide of hydrogen apparently exerts no beneficial influence upon the course of the disease. The seemingly mild cases are just as liable to die of heart failure, and the more severe cases pursue an uninterrupted course to the grave. In one case, at least, where it was used in the nostrils, the effervescing action was observable through the lacrymal canal into the eyes, and was, no doubt, the means of the infection and destruction of those organs.

Its application does not prevent the extension of membranous deposits. Under its use a pharyngeal case may become laryngeal or post nasal, and a nasal case may become ocular. The tendency to complications is just as great, and the number of instances of heart failure are not lessened. My opinion of the peroxide of hydrogen is, that it does not affect destruction of the bacillus diphtheriæ, and it does not prevent absorption of the specific ptomaine. But the effervescing that occurs when it is brought into contact with the diphtheritic membrane *does* exert a moral influence upon the parents of the patient. They observe that action, and are impressed with the idea that the membrane is undergoing rapid destruction; and therein, perhaps, is the chief use of the peroxide of hydrogen in this disease.

TREATMENT OF DIPHTHERIA.

By A. S. GERHARD, M.D.,
PHILADELPHIA, PA.

MY treatment of diphtheria is based upon the assumption—in my opinion a demonstrated fact—that the disease is primarily of *local* origin, brought about by infection. In what manner or by what means this infection, by a specific pathogenic microbe is accomplished, is immaterial to the question of treatment.

The task before the physician, therefore, is—if possible—to kill this microbe; to prevent its dissemination and spreading through adjacent canals and cavities; to remove its external products—the diphtheritic deposits—from the fauces and nasal passages as fast as they accumulate; if its soluble ptomaine has entered the circulation, producing the well-known *general* symptoms of the disease, together with some of its sequelæ—such as paralysis—to neutralize its effects; if the larynx and trachea become involved and obstructed, to attempt removal of the obstruction, or to open a passageway for oxygen to the lungs; so to strengthen and fortify the patient's system that he may be able “to bear up until the disease has run its course,” and, finally, to treat the sequelæ.

It is not my purpose here to take into consideration all the points just stated. I desire simply to present my plan of therapy in reference to the first three. If the treatment is successful as to these, the others very rarely require attention.

Of all the many and various substances, aseptic, antiseptic, disinfectant, astringent, etc., none are entitled to the appellation *microbicide*, as locally used or inwardly given in the treatment of diphtheria. The most efficient of these are the most dangerous, because more is required to kill the microbe than is necessary to kill its host. But in the light of our present knowledge and experience, the employment of such substances is absolutely required in order successfully to combat the disease. And of them all, according to my more recent experience, the *peroxide of hydrogen* is the best and most satisfactory.

It is true, peroxide of hydrogen here can in no sense be regarded as a microbicide *per se*. The diphtheria microbe is an *aërobic* one, and therefore is not affected by oxygen, either in its atomic or molecular state. But the unsatisfied atom of oxygen of the peroxide of hydrogen (H_2O_2) in its escaping, or *nascent* condition, when brought in contact with diphtheritic deposit, immediately seizes upon two atoms of hydrogen, an essential chemical constituent of such diphtheritic deposit, and tears it out of its combination. The diphtheritic deposit loses its identity

as such in consequence, and the microbe is deprived of one of its necessary conditions of life and growth. The chemical reaction here is actually visible, the sizzle and fizz being plainly seen. The resultant products, both as to the decomposed hydrogen peroxide and the new combination between the nascent oxygen, and hydrogen of the diseased tissue, as is easily understood, are simply water (H_2O).

This substance is, therefore, perfectly harmless and innocuous as far as the patient is concerned, and the affected air passages can be freely and frequently laved and douched without risk, no matter how much may be swallowed or enter the windpipe. I use for the purpose of application a simple bulb syringe of two or three ounces capacity, and inject the peroxide, diluted with an equal amount of water *which has been boiled*, either directly through the mouth into the throat, or through the nares along the nasal passages into the pharynx. At times, especially if the child struggles and resists, some is forced into the larynx, inducing a fit of coughing; but this is all the better, since thus very frequently much deposit and membrane is dislodged, and expectorated and sneezed away. I direct at the same time that the hands and face and interior of the mouth, and the throat, if gargling is possible, be frequently washed with a 5 per cent. solution of boric acid in water which has been boiled; the object of this is obvious. I have long ago discarded the use of swabs and probangs, not only as being unnecessarily cruel, but on account of the danger of wounding the pharynx, or even the larynx, of ramming some of the poisonous exudate down into the trachea, and thus setting up just that condition of things which necessitates the dangerous and generally futile operation of tracheotomy or intubation as a *dernier ressort*.

The general treatment is based upon the same therapeutical principles, with the further intention of preventing and counteracting the effects of the absorbed poisonous ptomaines, and of fortifying the system against their ravages. In order to fulfill these indications, the following formula may serve as a pattern for a child five years of age:

R.—Potassii chloratis.....	3.00.
Acidi hydrochlorici	2.00.
Tincturæ ferri chloridi.....	5.00.
Syrupi sarsaparil. comp.	15.00.
Aquæ destillatæ.....	40.00.

M.—S. Take a teaspoonful every two hours.

In this prescription it will be noticed we have the slow but constant evolution of free chlorine gas, one of the most powerful microbicides and efficient aseptic known, and to such an amount as sometimes to blow out the cork, or explode the bottle.

The question may be asked here, Why not use the official chlorine water? To which I may reply, There is the same difference, as to chemical affinity, between old chlorine gas, as found dissolved in water in the shops, and *nascent* chlorine, as there is between the ordinary oxygen gas in the atmosphere and that *allotropic* form of it just being liberated from hydrogen peroxide, as above noted. They may both be antiseptic, but neither is aseptic. When this nascent chlorine thus formed enters the mouth and is swallowed, it immediately permeates every fold and fissure in the oral and faucial, and often the nasal and bronchial cavities and canals, exerts its aseptic and microbicidal energy, at the same time sterilizing the circumjacent healthy tissues, thus preventing the spread of the disease, while at the same time it assists directly and indirectly in throwing off the exudate. We may also assume that some of this

gas, on account of its great diffusibility, enters the circulation, particularly through the stomach, and possibly assists in counteracting the ravages of the absorbent poisonous ptomaines.

If we now add to this mixture the proper dosage of quinine, preferably the muriate, in which it will readily dissolve, we have at the same time a medicine which, according to common and general experience, is perhaps best calculated to give that tone and stamina to the system which, together with nourishment and diffusible stimulants, will carry the patient successfully through the crisis.

The treatment may be summed up as follows:

1. Those affected are isolated, if at all possible, by placing them in the most remote room of the house, from which everything of a textile nature—carpets, hangings, etc., excepting what can subsequently be boiled or burned up—has been removed. This room is to be kept well lighted and ventilated, and the temperature kept equably at about 65° F. The air must be “disinfected” by the use of chlorinated lime, carbolic acid, or, better still, by burning a little sulphur on an iron shovel several times during the day.

2. The diet must be regulated according to the patient's appetite and taste, and the experience of the mother, or other attendant, or the judgment of the physician. If septic symptoms supervene, of course “beef tea and milk punch,” and other suitable articles of concentrated and predigested food, and diffusible stimulants, must be given. Cold lemonade, ice-water, and cracked ice must always be on hand; a small piece of ice in the mouth now and then, crunched between the teeth, or swallowed whole, is exceedingly grateful, as well as beneficial.

3. The administration of the chlorine mixture, as well as the use of the hydrogen peroxide, must begin at once, and must be regularly and religiously pursued to the end, in spite of all struggling and resistance—a determined attack of diphtheria, in my experience, always means a determined fight. The application of the peroxide, from two to six times during the twenty-four hours, should be done by the physician himself.

4. A plentiful supply of otherwise useless rags, for cleansing and wiping, should be constantly on hand; these must be burned up as fast as they become soiled. After the case is ended, the bedticking, pillow cases, spreads, and sheets must be subjected to prolonged boiling and thorough washing with carbolated soap, while the contents of the mattress and pillows must be burned. The sick-room itself must be aired and ventilated, thoroughly scrubbed and scoured, given access to the sunlight, and fumigated with sulphurous acid gas.

613 NORTH SIXTEENTH STREET, NOVEMBER 16, 1891.

TREATMENT OF DIPHTHERIA.

By FRANK WOODBURY, A.M., M.D.,
PHILADELPHIA.

RECOGNIZING the fact that diphtheria is a form of septicæmia, or toxæmia, depending upon the pernicious activity of certain micro-organisms, the treatment should have three main objects in view:

1. The prevention of further introduction of the poison from without.
2. The arrest of development of centers of auto-infection, especially in the upper air-passages.
3. The administration of agents which, after absorption, will act as antidotes to the toxic products of the local disease centers, and overcome their depressing effects upon the heart and nervous system.

The first requirement would be met by securing a good environment, such as a well ventilated upper room, without stationary wash-stand, or adjoining bath-room and water-closet, and having no sewer pipe discharging its foul miasm immediately above or below the window. A room into which the sunlight comes in the morning is desirable. It should be heated by a stove or open grate, and it is hardly necessary to say should only contain furniture capable of being cleaned with bichloride solution, and hangings or rugs which can be steamed or otherwise disinfected. A block of wood one or two inches in height, and extending the full width of the window frame, can be placed under the lower sash, so as to leave an open space between the upper and lower sashes for ventilation of the room. The second indication, the disinfection of the local centers in the throat or nose, or elsewhere, is fulfilled by various applications, sprays or washes. Among the best of these is solution of hydrogen peroxide diluted with one or two volumes of pure water. Zinc sulpho-carbolate (3 to 10 grains to the ounce, or in the zymocide solution furnished by Reed and Carnrick, combined with other disinfectants), sulphur in fine powder insufflated into the throat at short intervals, beta-naphthol and sugar used in the same manner, Monsel's solution, or tincture of chloride of iron diluted with glycerine and water, and applied by probang or brush; inhalations of the vapor from slaking lime, chlorate of potash lozenges dissolved slowly in the mouth, the use of digestants, such as trypsin, papayotin, etc., combined with douches of mercuric chloride or iodide, or even of common salt, all accomplish the desired object more or less completely. Some of the remedies administered by the mouth also exert a local effect in the act of deglutition. The membranes should not be roughly detached from the throat, but their separation should be encouraged by the use of antiseptic sprays, or by carbolic acid or chlorine water injections, as in the method recently advocated by Dr. A. Seibert, of New York. The third object, the counteracting of the poison in the system is also attained by various means. The calomel method advocated by Dr. Reiter, and more recently by Dr. Daly, of Pittsburg, seems to be what the latter claims for it, the simplest and most efficient treatment of diphtheria. Of this agent, two grains may be given every hour until serous discharges are obtained, having the appearance of clear water with some green bile floating upon the surface. The bichloride (gr. $\frac{1}{16}$ to $\frac{1}{8}$ every hour or two) has also given satisfactory results. The chlorine solution of Watson is also very efficient, and has the advantage of not being toxic itself; chlorate of potassium being depressing to the heart should be used with great care, if at all; at the same time the iron and potassium chlorate mixture has been largely used and with success. Dr. Traill Green, of Easton, Pennsylvania, prefers chlorate of sodium lozenges (gr. j-ij), to the ordinary chlorate of potassium lozenges, and I have used them on his recommendation with satisfactory results.

In any given case I would be guided by circumstances as to the choice that I should make of the preceding remedies. From personal experience I would give alcohol a very high place as an antiseptic in diphtheria, and administer it in the form of brandy, whiskey, or gin, in 15 to 30 minim doses every hour or two, steadily continued, to the youngest children, carefully watching its effects. In one case in the practice of my friend, Dr. Bernardy, a child apparently dying was allowed to drink freely of lager beer, and at once improved and made a good recovery.

Quinine in tonic doses, combined with strychnine, if there is marked weakness, or paralysis, is useful during convalescence. Food should be given at short intervals in an easily assimilable form; peptonized milk or broth, ice cream, toast-water with beef peptonoids, Mosquera's beef meal, or Bovinine, nutritive enemata, and various other expedients will suggest themselves. Cold applications to the throat, sponge-bathing with alcohol and water, add to the comfort of the patient. In case of laryngeal obstruction early tracheotomy may save life, but when it is done it were well it were done quickly.

218 S. SIXTEENTH ST.

MEMBRANOUS CROUP.¹

By W. BLAIR STEWART, A.M., M.D.,

Instructor of Medicine in the Medico-Chirurgical College, Philadelphia.

GENTLEMEN:—There is no disease in the whole field of medicine that will tax your ingenuity and skill to a greater extent than will membranous or true croup. It is a disease that every physician should thoroughly understand, and be prepared to fight in any of its stages. It is a disease where the physician must be master, and assert his authority to the extent that his directions must be followed strictly to the letter. Never take hold of these cases in a half-hearted, timorous and doubting manner; but, recognizing the fact of the small proportion of recoveries that take place, assume charge with a resolution to fight it to the bitter end. Unless you begin with these premises it would be far better for your reputation to refuse treatment entirely. True membranous croup is a comparatively rare disease in the practice of most physicians, but this offers no excuse for its neglect.

SYNONYMS.

This disease is known under the names of croupous, membranous or pseudo-membranous laryngitis; true croup and laryngeal diphtheria in children.

DEFINITION.

An acute, specific inflammation of the laryngeal and superior tracheal mucous membrane, accompanied by a fibro-plastic exudation or false membrane; constant fever; great dyspnoea, and usually terminating in death.

ETIOLOGY.

Every disease is dependent upon two distinct conditions that have been spoken of as a receptive or predisposing condition and the true or exciting condition. A person in perfect health will not be attacked with membranous croup until he has been brought under the depressing influence of some irritant. Membranous croup is a disease of children between the second and seventh year. Its most prolific predisposing causes are bad hygiene, exposure to cold, debility, heredity, and anything that would lower the general nervous and vital tone of the body.

The True Cause.—The great similarity between true membranous croup and diphtheria, and the fact that it is most common during epidemics of the latter, has led some authors to claim that it is due to a specific microbe, similar to or identical with that of diphtheria. This being the case, it is contagious.

¹ Quiz lecture delivered October 22, 1891, in the Medico-Chirurgical College.

SYMPTOMS.

It is gradual in onset. Child is cross, fretful and slightly feverish; has a hoarse cough; anorexia; disturbed sleep, and constant thirst. The cough soon becomes ringing, and is accompanied with slight dyspnoea. Breathing is stridulous and voice husky. Tongue is coated. Examination of the pharynx, tonsils, and posterior nares shows a few white or ashy spots. The fever gradually increases, and paroxysms of marked dyspnoea, followed by a period of repose, occur. The slightest noise brings on a paroxysm. On the second or third day dyspnoea is so marked that the child is almost cyanosed. It grasps at its throat; head is thrown back; muscles of respiration are prominent; epigastrium retracted; pieces of membrane are occasionally coughed up or vomited; pulse is weak; eyes sunken and staring; cold extremities; gradual coma and death from asphyxia; carbonic acid poisoning or complications of pneumonia or bronchitis on the sixth or seventh day.

Favorable cases are indicated by a gradual amelioration of symptoms; coughing up large pieces of membrane; gradual return of voice; lessening of fever, and slow convalescence. Usually followed by bronchitis and temporary paralysis of the vocal cords.

PATHOLOGY.

An irritant (possibly a germ) produces congestion of the laryngeal and superior tracheal mucous membrane; causes transudation of serum, proliferation of cells and diapedesis of leucocytes, which gradually elongate and form fibrous cells and tissue known as false membrane. This membrane covers and occludes the larynx, pharynx (at times), and superior portion of the trachea and often extends into the bronchial tubes. When removed, small bleeding points are left. Parts are swollen and red. Lungs often present a condition of pneumonia, emphysema or bronchitis from the "cupping glass action" exerted by forced efforts at inspiration. The kidney, liver, spleen and brain are congested. The blood is thick and dark in color.

DIAGNOSIS.

Laryngismus Stridulus.—First and second year. Sudden onset at night, with no prodromes; lasts but a few minutes. No fever. No expectoration. Croupal breathing during the attack. Usually no sequela. Death very rare.

Catarrhal Croup.—Second or third year. Sudden onset at night, with catarrhal prodromes. Lasts from one to three days. Slight fever during the attack. Mucous expectoration. Croupal breathing during the attack. Slight bronchitis complicates or follows. Death comparatively rare.

Membranous Croup.—Second to seventh year. Onset is gradual, with long prodromes. Duration, from four to six days. Constant high fever. Expectoration of false membrane. Constant increasing croupal breathing, with frequently recurring paroxysms of marked dyspnoea. Complicated by bronchitis, pneumonia or emphysema. Most cases die.

PROGNOSIS.

Recovery, in true membranous croup, is rare. Catarrhal or false croup is too often mistaken for true croup; hence, the unreliability of data at our command.

TREATMENT.

Whether the disease be of diphtheritic origin or not, the accepted treatment for one answers and is the same as that used in the other.

Onset.—Put the child in bed between blankets; insist on *absolute quietness*; keep the room at a uniform temperature, and the air constantly moist with steam. Quinine bisulphatis (gr. ij) every two or three hours, with hydrargyrum chloridum corrosivum (gr. $\frac{1}{10}$ to $\frac{1}{8}$). Some practitioners prefer the use of hydrargyrum chloridum mite. Constant inhalations of medicated steam (oleum eucalyptol and tr. iodini comp.); applications of heat or cold to the throat in the form of compresses. If paroxysms are very frequent and child very restless, give small doses of pulvis opii et ipecacuanhæ *during the first stage only*. Full doses of pilocarpine are said to abort; but sufficient statistics can not be obtained to speak positively.

Second Stage.—Continue inhalations of steam; administer quinine and hydrargyrum in small doses. Solvents for the false membrane are of little value. Sprays of lactic acid, peroxide of hydrogen and soda bicarb. are recommended. The spray of hydrogen peroxide should be used at intervals of every half hour or every hour, if it does not produce too much excitement of the paroxysms. Two formulæ are strongly recommended for the throat affection, as follows:

R.—Potassii chloratis..... 3j.
Acidi hydrochlorici U. S. P. (not dilute)..... f3iss.

Misce et adde.

Tr. ferri chloridi..... f3ij.
Aque q. s. ad f3iv.

Misce.—Signe. One teaspoonful (undiluted) every two hours.

"If the patient wish to take a swallow of water first, it may be allowed; but none with or after the medicine, as the object is to allow as strong an affect as possible on the diseased throat." (*Med. World*, Vol. VI, No. 1, page 10.) This formula answers best when the pharynx is involved. It may be used as a spray, and can be classed under the head of severe medication.

Another formula is that recommended by a physician in THE TIMES AND REGISTER for the cure of diphtheria, and is equally efficacious in membranous croup:

R.—Potassii chloratis..... 3j.
Tr. myrrhæ..... 3iij.
Acidi Carbolic. gtt. iv.
Mel. despumat. 3iv.
Aque q. s. ad f3iv.

Misce.—Signe. Give fifteen drops every half hour, and use as a spray at intervals of fifteen minutes, night and day, until relieved.

"* * * or if the mixture smarts unpleasantly in the mouth or throat, then the solution of chlorate of potash should be changed for lime water. * * * Diphtheria grows best while the patient sleeps, and to be successful *do not lose one dose day or night*." * * *

Failing in this, tracheotomy or intubation becomes necessary. See that the tube is always kept clear, and accomplish this by means of a feather or small brush. Sustain the strength by most nutritious diet, given in small quantities at frequent intervals, and tonics. Aconite, aqua calcis, bromides, ammonium and emetics are all too depressing and of doubtful utility. Emetics, remedies that have been greatly abused, have their place; but why use them on every occasion? They only sap the little patient of that much strength and vitality that will be needed to tide them over the later stages. Only when there is a large mass of flapping, loose membrane, is one justified in giving an emetic and, even then, its utility is doubtful.

Third Stage.—When recovery is imminent, the patient must be sustained, as before, on best diet and tonics. Always watch the condition of the heart, and let it be the guide. Remove intubation tube as soon as it can be safely dispensed with. Prevent exposure and treat all complications and sequela promptly. Above all other hygienic measures, see that the patient is isolated, and that all expectoration and cloths used about the patient's throat and mouth are promptly burned.

The treatment of this disease, up to this time, has been rather unsatisfactory, and, if your patients do not respond promptly to your treatment or recover, there is no need for discouragement. On the other hand, put forth your greatest effort to follow those lines of treatment based on the antiseptic theory, and follow strictly rational therapeutic, hygienic, physiological and dietetic measures, using your own best judgment in the matter at all times. When you have a case of this nature, it is your duty to inform the parents of the gravity of the case, as it will be unwise for you to hold out any very favorable prognosis.

BRYN MAWR, PA.

DIPHTHERIA.

By HERMAN D. MARCUS, M.D.

NONE of the infantile diseases are more dreaded by both parents and physicians than diphtheria. Appearing as it does in the form of some minor complaint, such as a simple sore throat, it suddenly develops itself as one of the most fatal diseases of childhood.

During the year 1855, the attention of the medical fraternity was drawn to an epidemic in Paris and Boulogne, which epidemic soon spread to this country (1856), and England (1857). At that time diphtheria was unknown, and Bretonneau, of Tours, gave it its name on account of the peculiar membrane covering the parts affected. Later on the name "cynanche contagiosa" was proposed, but failed to become universal.

The etiology of diphtheria, though often discussed, is still unsettled, and though the germ theory is very prevalent it has not been universally accepted.

Klebs and Loeffler have succeeded in isolating a bacillus found in the diphtheritic membrane, and Roux and Yersin found through experiments on guinea-pigs (*Annales de l'institut Pasteur*) that subcutaneous injections of cultures of this bacillus give positive results. Oertel and Buhl described a micrococcus in the diphtheritic layers, while Rause (Cologne) claims the discovery of a micro-organism—*mucor salicinus*—which he believes to be the true cause of diphtheria.

So far it seems most probable that the Klebs-Loeffler bacillus is the causation of this disease, though this theory is by no means universally accepted.

Diphtheria is a *local* infection of the throat and tonsils, accompanied by a membrane involving the deeper layers. This membrane varies in thickness from one-twentieth to one-eighth of an inch, and consists of epithelial and granular cells. The neighboring lymphatics become enlarged, the bronchials contain more or less muco-purulent matter, the lungs may become affected, thereby causing pneumonia or collapse. It is a highly contagious and infectious disease mainly affecting the children, and is chiefly predisposed by changes in the weather, bad hygiene, misamatic surroundings, and follows epidemics of eruptive fever.

The onset is generally sudden. Prodromes may be present, such as headache, drowsiness or malaise.

The period of incubation varies from twenty-four hours to six days.

The first symptoms are sore throat and fever, which seldom goes above 103°. On inspection the throat presents a dry, red, angry-looking surface; the tonsils are enlarged; the patient complains of pain around the angles of the jaw, difficulty in swallowing and anorexia; the pulse is slow, thready and irregular, and cardiac murmurs may become distinct. Soon total inability to swallow, weakness, anæmia, and prostration may be observed. After a few hours or a few days the throat is seen to be covered by small white spots, which develop into the characteristic yellowish or grayish mucous membrane.

Diphtheria may spread to different adjoining parts and thereby cause most serious complications.

It may spread upward into the nose, downward to the larynx, and even to the œsophagus, forward into the mouth, into the blood, the eye, the ear, in fact through every sinus leading from and to the pharynx. Epistaxis, hemoptysis, dyspnoea, fetid discharges from the nose or ear, may greatly aggravate an attack. The tonsils and uvula may become thus enlarged so as to seriously impede the functions of the respiratory apparatus, and thereby greatly endangering the patient's life. Albuminuria and diphtheritic affections of the skin have been variously observed.

The sequelæ of this disease are in the first place paralysis, which does not confine itself to the pharyngeal or laryngeal muscles, but may extend to other muscles of the body. The feet and legs may become thus affected so as to cause unsteady gait, etc. This phenomenon (paralysis) is most probably due to an anterior polio-myelitis. Other sequelæ may be permanent renal diseases, debility and anæmia.

The duration may vary from three days, or even less, to two or three weeks. Relapses may occur.

The prognosis is more or less always grave. Children have less chances of living than adults. Implication of the air passages, extensive sloughing of the throat, epistaxis, copious discharges from the nose and ear, feeble and rapid pulse, uræmia, albuminuria, and nervous disturbances are factors augmenting the gravity of a case. As regards prognosis Dr. Waugh (*TIMES AND REGISTER*) says:

"The principal element in the prognosis of diphtheria is to be found in the attending physician. If he is a believer in the strictly local nature of the disease, and in the importance of efficient and early local treatment, the chances of recovery are good."

Diphtheria being a local disease, our first object must be the use of remedies locally applied. Constitutional treatment is undoubtedly of value, but our main efforts must lie in local medication. Just as little as we would expect an open wound to heal by constitutional treatment, just as little can we have any success in combating this disease without applying such remedies *locally* as would most likely benefit our patients. Constitutional treatment may be indicated to counteract arising complications, but to treat the disease proper *only local* medication will lead us to success.

The methods of treatment and the variety of remedies proposed for the treatment of this disease are manifold. Dr. Waugh recommends his trichloride mixture as follows:

R.—Potassii chloratis..... 3i
Ac. hydrochlorici dil..... 3iss
M. et adde:
Tr. ferri chloridi..... 3ii
Aque,.....
Syrupi.....ââ, q. s. f 3iv
M. Sig.—One teaspoonful p. r. n.

Seibert (*Archiv. of Pediatrics*) is a strong advocate of local submembranous treatment. His object is to bring very strong solutions in direct contact with the deep parts of the mucous membrane. He uses chlorine water (U. S. P.) and a specially constructed syringe, which terminates in five or six short sharp-pointed needles. After making the injections he prescribes a gargle consisting of 15-30 grs. of tincture of iodine and 10 drops of concentrated carbolic acid to 4 ounces of water; a teaspoonful to be used for swallowing and gargling alternately every 15 minutes. If the child is too young to gargle, 5 drops of carbolic acid are added to the mixture, and a half teaspoonful administered every half hour.

Loeffler recommends gargles of corrosive sublimate solutions (1-1000), 3 per cent. carbolic acid dissolved in 30 per cent. alcohol; painting of the throat frequently with 5 per cent. carbolic acid, 2 per cent. bromine and 1 per cent. chlorine solutions.

Manning (*British Medical Journal*) advises the following treatment: A syringe holding 4-6 ounces is filled with a solution of 4 parts pulv. boracic acid and 3 parts glycerine. Heat and mix thoroughly. A tablespoonful of this is dissolved in a pint of water. The nozzle of the syringe is directed well back of the tongue and forcibly emptied, receiving the water which rushes out in a small basin. This to be repeated every two or three hours.

Van Wyck (*Med. Record*) divides the diseases into five stages, and uses appropriate remedies for each stage. His *modus operandi* is to administer 3-10 grs. of calomel combined with 2 grs. of bicarbonate of soda during the stage of invasion, to be repeated every fourth hour until stools are colored green. He then sprays the parts with peroxide of hydrogen 1-3 parts of water, and when the membrane is limited to a circular area he paints the parts with peroxide of hydrogen (full strength) taking care not to get it on the adjoining healthy tissues. The spraying is repeated every two hours, the painting three times daily.

F. Henmann gives first a purgative dose of calomel and after effect is established he prescribes.

R.—Metallic iodine..... gr. v.
Alcohol..... 3v.
Chloroform..... 3ss.

M. Sig.—External use.

After washing the pharyngo-nasal mucous membrane with lime water the mixture is applied, to be repeated after six hours. Energetic perspiration is then provoked, the patient being allowed to perspire for two or three hours. He is then rubbed dry and stimulants are administered. The next day a simple application of the iodine is sufficient. The third days' treatment constitutes the same as the first days, and so on.

Dr. Cohen, of this city, advocates the use of iced cloths to be applied over the neck, and to extend to the ear in case respiration is interfered with.

Iodoform, salicylate of soda, nitrate of silver, and other remedies have been recommended at different times.

Tracheotomy or laryngotomy may be at times the only means of saving the patient's life, and no delay should be suffered to occur to perform the operation when indicated.

The general management requires, in the first place, perfect isolation of the patient in a moderately heated room. Cleanliness and the use of disinfectants about the room, bed clothing, etc., are of the utmost importance.

Supporting treatment must be resorted to from the beginning, and, though alcoholic stimulants should not be used at once, still they must be freely given when indications require its use. Good, nutritious liquid food should be regularly given, and if the patient is unable to swallow, enemata must be administered. Strict attention must be paid to any complications arising in the course of the disease, and any indication of any arising must be promptly combated by proper medication.

A change of air, good diet and tonic treatment will hasten convalescence.

EUROPHEN.¹

(O-cresoliodide.)

THERAPEUTIC OBSERVATIONS.

By A. NOLDA, M.D.,

German Baths Physician at Montreux and St. Moritz Bath.

AT the beginning of this year the Farbenfabriken, formerly Friedrich Bayer & Co., Elberfeld, sent to the clinics and hospitals a new preparation of iodine, o-cresoliodide, which was to prove a substitute for iodoform. Thorough trials, which were instituted by Dr. Eichhoff, in Elberfeld, and by Dr. Peterson, in Wurzburg, demonstrated the correctness of the claims. These trials were based upon the results of the bacteriological and pharmacological examinations conducted by Dr. Siebel in the physiological laboratory of the Farbenfabriken. The details thereof will be found in the reports of the physicians.

Europhen is a very fine yellow, somewhat sticky powder, which is to be protected from light and moisture. It is easily soluble in ether, alcohol, chloroform, collodion and oil; insoluble in water and glycerine. It has a moderately strong, not unpleasant smell. The amount of iodine contained is 28.1 per cent.

After the non-poisonous nature of the preparation had been established in the laboratory, and the clinics had given the indications for its therapeutic use, I had no hesitation in making a trial of europhen in my practice. Only the pure powder was used.

At the beginning of August a number of cases of ulcer molle came into my hands for treatment. If one case of venereal disease occurs in a health resort, the physician can always be certain that at the shortest notice a considerable number of patients of all classes, affected by the same disease, will present themselves to him. The supply in such places is generally small, the demand great. As Eichhoff himself was able to treat but two cases of ulcer molle with europhen "because lately in this region it has appeared rather seldom," I will enter upon it somewhat more minutely.

Altogether six cases of chancroid (among them one girl) were treated with insufflation of europhen powder, and carefully noticed. The ulcers were washed out morning and evening with corrosive sublimate 1-200, carefully dried with cotton, insufflated with europhen powder. In four of these cases, these were patients taking the baths, who were able to take all precautions—the ulcers were healed and perfectly cicatrized in seven to nine days. In the other two cases, the cure took twelve to fourteen days respectively, as the vocation (chambermaid and coachman) afforded no bodily rest nor chance of sparing one's self.

¹ Special reprint from the *Therapeutic Monatshefte*, October, 1891.

At first I was intending to treat half of the cases with iodoform, and the other half with europen, in order to thus have a basis of comparison as to the healing effect of both preparations. I changed my mind, however, for the following reasons:

1. The several cases presented a very differing picture, as regards extent and depth as well as the secretion of pus.

2. These comparative examinations are only to be used when the patients can be brought under exactly the same conditions, diet, rest, etc., which is impossible in the treatment of patient who are walking about.

Having had a rather extensive experience with *ulcus molle*, in Montreux, soft chancre occurs relatively often, in contradistinction to primary syphilitic affections. I found it established by these six cases, that europen cleanses the ulcers in shorter time, produces better granulations, and leads to quicker healing than iodoform.

The experimental proof is afforded by a seventh case, the clinical history of which must be introduced.

A. K., Italian laborer, twenty-four years old. Visited me during office hours on August 9. The last coitus was at the last part of June. In the region of the frenum of the prepuce is an ulcer, about 2.5 cm. long, and 1. cm. broad, which creates foul smelling pus. Frenum destroyed. Margin of the ulcer moderately infiltrated. No swelling of the glands; no syphilitic roseola. Diagnosis: neglected, *ulcus molle*.

The large size of the ulcer brought it to my mind to treat one part of it with iodoform, and the other part with europen, the parts to be of equal size. I chose the half which looked worse for treatment with the new preparation.

The treatment was the following: After the ulcer had been carefully cleansed with corrosive sublimate, 1,200, and dried with cotton, a thin band of cotton was laid across the middle for the purpose of a boundary, and then the right side, the worse looking one, insufflated with europen, and the left side with iodoform. Bandage, rest in bed. Bandage changed morning and evening.

Six days later, August 15: Beginning of granulations and of cicatrization from the edges. The europen granulations appear more vigorous.

The further course was such that the surface treated with europen healed more rapidly, and, on the 26th day of August, was completely and well healed; while in the case of the surface treated with iodoform, the same good result was not reached until the 28th of August.

Europen, therefore, healed the worst looking part of a fearfully neglected ulcer molle two days quicker than iodoform.

I believe that this experiment is free from reproach, and proves, at the very least, that europen has just as good an effect as iodoform.

Other cases, also, which were treated with europen, gave remarkably good results. Three cases of suppurative otitis media, two cases of ulcer cruris, and one hard chancre were especially favorably influenced. I employ the preparation now in all cases in which, up to this time iodoform was indicated. Trials in using europen in the form of a glycerine emulsion hypodermically in the treatment of gravitating tuberculosis abscesses, could not be instituted on account of lack of material. There has nothing appeared concerning this subject in the previous articles on europen. According to the exhaustive bacteriological examinations of Siebel, however, europen appears to possess the same anti-tuberculous

effect as iodoform. Trials with this purpose in view would certainly prove of advantage.

The chief advantage of europen in practice among those who are not confined to the house is its *slightly intense* odor. What must not physician and patient—especially in healthy resorts—undergo if one story, or, perhaps, the whole hotel, is made pestilential by an iodoform treatment? Guests and landlord make remonstrances—the former threaten to move out, the latter will suffer the patient to remain no longer in his hotel, etc. Lesser (in his work on "Venereal Diseases," Leipsic: F. C. W. Vogel) writes, in the description of the therapy of the *ulcus molle*, as follows:

"A very unpleasant property of iodoform is the penetrating odor of this remedy, which it is impossible by any means fully to suppress."

The experience of other authors, as well as my own, establish the following propositions as to europen.

I. It is indicated in all cases in which iodoform has hitherto been used.

II. In suppurating ulcers and inflammations, its healing effect exceeds that of iodoform.

III. It has farther the following advantages over iodoform:

1. The non-penetrating and not unpleasant odor.

2. Its low specific gravity (five volumes of europen weighs the same as one volume of iodoform.)

3. Its innocuousness.

The fullest recognition is to be accorded to the *Farbenfabriken*, formerly Friedrich, Bayer & Co., in Elberfeld, who have enriched our medical treasury in the last few years by a number of most superior remedies for this splendid new preparation. We hope that the price will be such that europen can be universally used—not merely in wealthy circles.

Literature which has appeared concerning europen, a new iodine product. *Therapeutische Monatshefte*, No. 7, 1891.

Eichhoff concerning therapeutical results with europen in dermatology. *Therapeutische Monatshefte*, No. 7, 1891.

Peterson: Concerning cresoliodide (europen). *Munich Medicinische Wochenschrift*, No. 30, 1891.

Goldman: Concerning europen, a new substitute for iodoform. *Pharmaceutische Zeitung*, No. 56, 1891.

ST. MORITZ BATH, SWITZERLAND, SEPTEMBER 1, 1891.

The Polyclinic.

THE POLYCLINIC HOSPITAL.

DIPHTHERIA.

DR. S. SOLIS-COHEN says that each separate case requires the best judgment of the physician, and that we cannot treat diphtheria or any other disease successfully by formulæ.

His treatment is as follows:

Free stimulation, using for this purpose some form of alcohol. He recommends burnt brandy (take a teacupful of brandy, and while it is burning, let it melt a piece of sugar held over it with a fork). Malaga wine is a good thing. Stimulation should be carried to the point of intoxication and no further.

Carbolic acid solution (5 per cent., and sometimes even stronger); hourly inhalations until the urine becomes olive colored, when it should be stopped for twenty-four hours. This effect on the urine must be carefully looked for.

Tincture of chloride of iron for the membrane, applied thoroughly and firmly with a sponge or swab.

This causes the membrane to dry and curl up, so that it is more easily removed. Of course it must be applied to all the diphtheritic patches, or its purpose fails. Tincture of chloride of iron should also be given internally in large doses.

Peroxide of hydrogen solution, 1 part to 3 of water or peppermint water, used internally, and by spray locally, as a germicide. When accessible, Dr. Cohen prefers to use that preparation of peroxide of hydrogen known as ozonic ether.

A gargle, prepared as follows, has been found useful, and used freely by him.

Take ʒij of chlorate of potash, dissolve in hot water and set aside. Then take a ʒvj bottle, put in it ʒvj of clarified honey, and smear the sides of the bottle with it, shaking it well. After this add, teaspoonful by teaspoonful, shaking well after each additional spoonful, compound tincture of cinchona ʒij, and ammoniated tincture of guaiacum ʒij. To this solution add gradually the chlorate of potash which has been set aside, shaking the mixture thoroughly, and to this add water q. s. ad ʒvj. Every half hour, or hour, or two hours, the patient should gargle or bathe the throat with a teaspoonful of this solution. Every two hours let him swallow a half teaspoonful or a teaspoonful. Dr. Cohen thinks this is an excellent thing taken early in the case, and is good in sore throat and tonsillitis.

The patient should be carefully isolated in the highest room of the house, from which all carpets and hangings have been removed. Outside of the door should be a sheet saturated with carbolic acid solution, and things should be handed by the attendant on one side of the sheet to the attendant on the other, without themselves passing in or out of the sick room.

PHILADELPHIA HOSPITAL.

I BELIEVE that diphtheria is a local disease at the start, and that the rational treatment of it consists of local applications. It is not always so much a question of the drug as of the thoroughness with which it is applied. The disease does its deadliest work upon the nervous system (and possibly upon the blood). All fatal cases which I have seen have died of heart-failure, some of them quite suddenly. This heart-failure is apparently caused by an overwhelming of the nerve centers and nerves. Respiratory failure from the same cause is also seen. The poison which does this damage is probably the product of the specific microbe of the disease, and the seat of initial and greatest activity is in the local sore.

The best drugs, according to my own observations, are:

1. Calomel.
2. Corrosive sublimate.
3. Sulphur.
4. Tinct. chloride of iron.

The latter can be advantageously joined with chloride of ammonium. I have used with advantage a spray made up of lime, sulphur, eucalyptus and extract pancreatic.

If the heart is weakened by a poisoning of the nerve centers alcohol will sustain it better than either digitalis or strychnine.—*Lloyd*.

FOR NASAL DIPHTHERIA,

Where I have never ventured to employ the strong chlorine-acid mixtures, the nitrate of silver solution, 5 grains to the ounce, injected every four hours, has

often answered admirably. But peroxide has been placed in our hands, and for nasal diphtheria it is simply the ideal remedy, penetrating further and doing its work more thoroughly, while it is not apt to injure the delicate structures as does the nitrate. The salicylic solutions have proved disappointing in true diphtheria, though of much more value in scarlatinal angina and coryza.

Whatever be the agent used in these nasal cases it should be employed instantly, when the first signs of coryza appear, though this secretion is very much less irritant than that of an ordinary cold.

In all cases where turpentine is employed as a topical application, or by vaporization, the *Sanitas Oil* is a much better agent. There is some danger of this valuable drug being neglected, since peroxide has attracted so much attention. The same active antiseptic exists in this oil, and in addition the turpentine is an efficient topical remedy, destroying fœtor and the micro-organisms that cause it, and stimulating in the mucous membrane a tendency towards healthy repair. It has seemed to the writer that this oil penetrates more deeply into the tissues than watery or alcoholic solutions, while glycerine and fixed oils cannot penetrate at all. The *sanitas oil* may be applied undiluted to the affected surface, and repeated as often as the reproduction of the exudate warrants. The old idea of timing applications should be entirely dismissed. If the exudate be increasing, in one hour, or four hours, or four minutes, a new application is indicated, and very speedy reproduction should be met by increasing the strength of the application.

At every visit the doctor should examine the throat of every member of the household, and he should also enjoin upon them the necessity of using mild detergent gargles, etc., to prevent infection.

DIPHTHERITIC EPISTAXIS,

Is one of the most dreaded manifestations of this disease, and recovery from it is, to say the least, quite exceptional. Several years ago I treated a case of this sort by injecting into the nostrils a solution of chromic acid. That child recovered; the first in many years' practice. Since this period I have had but few cases of the kind, thanks to the solicitude with which I have watched for the first signs of nasal implication, and the untiring diligence of my nurses. But every case of diphtheritic epistaxis has been treated with chromic acid, and every one has recovered.

DIPHTHERITIC PARALYSIS,

Allows of a favorable prognosis. One case, of by no means severe diphtheria, was followed unexpectedly by paralysis of all four limbs, neck and body; in fact, the child could breathe and eat, but that was all. Unfortunately she did not recover entirely, but is still, years after the attack, unable to walk without support, to articulate plainly, or to use her hands freely.—*Waugh*.

IN the treatment of diphtheria I have for many years relied almost wholly upon the muriated tincture of iron combined with the sodium chlorate. Later I have usually added the sodium chloride. My formula is sod. chlorate, sod. chloride, of each 2 drachms; tinc. chloride ferri, 3 drachms; syrup limon and water, of each enough to make a 5-ounce mixture. Dose, one teaspoonful every two, three or four hours, according to the condition of the case.

In many instances I have the parts sprayed with this mixture every two hours.—*Atkinson*.

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DIPHTHERIA.

IN every newspaper we read, we find notices of the appearance of diphtheria in some locality, and of the sad fatalities occasioned by this dreadful disease. Whole families of children are swept away in a short time, and the proud and happy parents, who look upon their little ones gathering about their table on a Sunday, may be deprived of all before the end of the week; for it is characteristic of diphtheria that when once it enters a house, especially in the country, there is no safety for the little ones short of instant flight. Children reared in the pure country air have less resisting power than those who are seasoned against many diverse noxæ by breathing the atmosphere of the crowded city. But even here we learn to dread diphtheria. Who of us is there but stands in fear of this foe; who has not in his memory the recollection of defeats after pitched battles with it? When we hear a physician boast of his ability to "cure diphtheria," we pity him. He will be wiser some day; for it is another characteristic of this disease that it appears in a mild form, readily yielding to any remedy that may happen to be directed against it; until the doctor begins to gather confidence in his power to control it, when suddenly it appears with a malignancy that baffles every effort, when, utterly defeated, the unfortunate doctor sees his lambs slaughtered hopelessly before his eyes, while he stands impotent to prevent the sacrifice.

Nevertheless, there is much to be done for even the worst forms of diphtheria. Starting from the firm ground of a correct theory as to the pathology, we can nearly always accomplish our object. The disease is primarily local—a germ disease—spreading in all possible directions from the original focus, giving rise to constitutional symptoms in three ways: first, as due to the local lesions; second, as caused by the absorption into the blood of ptomaines generated in the diseased tissues of the mucous cavities, such as the nose; third, as dependent upon the actual

invasion of the blood by the germs of the disease themselves.

Local remedies without end have been lauded in this affection. Many of them are valuable; *any* antiseptic is valuable, provided it be used *strong* and *often*. Strong enough to destroy the false membrane and its contained bacilli. Often enough to keep down the renewal of the growth, and preserve the aseptic condition of the part. The growth recurs with marvellous rapidity; it seems to extend and thicken visibly. Every treatment reported as successful in bad cases is notable from the frequency of the applications. In France, one worthy man awakes the child every quarter-hour for the swabbing. "Sleep is important, but diphtheria sleeps not; and during a half-hour's peaceful rest the dead-line is passed, and the patient's doom is sealed."

Of the local remedies, the bichloride has, for some years, enjoyed the preference, though many practitioners have adhered to Watson's teaching, and preferred chlorine. Years ago we satisfied ourselves, by repeated trials, that neither sublimate nor any other agent then in use could compare with nascent chlorine in its power over diphtheria. Some cases die under the chlorine treatment, as they will under any strictly *surface* local treatment, because the disease sometimes gets into localities whither we cannot follow it with the antiseptic. For such cases we have never possessed a remedy, and probably never will.

Of recently-introduced local remedies, two have been highly commended: peroxide of hydrogen and sulpho-calcine. With each of these the writer has saved lives, in cases where the chlorine mixture affected the healthy tissues so strongly as to preclude its use.

In the matter of prophylaxis, there is hope for better things. Diphtheria haunts certain localities, certain houses, and the enforcing of good sanitation will do far more, by preventing the disease, than medicine will in curing it. An outbreak of diphtheria should always be followed by a sanitary inspection, which should not be considered complete until the cause of the trouble has been discovered and obviated. Then we should have no such history to record as that of Gallitzin, or as those of two houses known to us in Philadelphia, which have for years caused the death of each family of children occupying them. When sanitary science receives its due share of attention in medical colleges, and the reports of the State Boards of Health are placed on the curriculum of the public schools, diphtheria will become rare.

TREATMENT OF TYPHOID FEVER.—A good authority in Paris recommends the following treatment for typhoid fever:

R.—Salicylate of bismuth. gr. x.
Naphthol A. " viij.

For one wafer, night and morning.

R.—Sulphate of quinine gr. xx.
Extract of cinchona. ʒj.
Decoction of valerian. ʒiv.

To be administered by the rectum at four in the afternoon, each day. Besides which, three enemata of cold water during the day. Bordeaux wine and beef-tea.

Letters to the Editor.

DIPHThERIA.

THE following method of treating Diphtheria has been so almost constantly effective in my hands for seventeen years, that I have had no occasion to accept anything new, however scientific or complicated:

Begin with an efficient calomel purge. After purgation: 3j-3ij (according to age of patient) of Watson's Chlorine Mixture, diluted with an equal portion of water when taken *every hour*; to be used also as a gargle as often, if patient is not too young to gargle.

Once or twice during the progress of the case (give at night only) pulv. ipecac. gr. ij-iv., potass. chlor. gr. ij-viiij.

A thin broad slice of fat bacon bound in front and at the sides of the neck has always seemed to lessen tumefaction of the large lymphatic glands, perhaps by maintaining local sweating.

Pay but little attention to feeding, for the reason that this treatment will likely be so speedily curative that patient will see to the feeding himself. Have not met with heart failure, paralysis nor other sequel since using the above simple way of treating this justly dreaded distemper.

P. S.—*Watson's Chlorine Mixture*: Place gr. v. potass. chlor. in a 6-oz. vial, add gtt. x ac. muriat. C. P. When effervescence has ceased fill the vial gradually with good ordinary water. This mixture is not poisonous.

H. D. TAGGART.

AKRON, OHIO.

THERMIC DIARRHŒA.

IT is customary to write articles incident to the approaching season; but I believe it would be better if we would write upon the diseases with which we have just been contending, as the seasons close, for we will write with more life, more zeal, and more correctness. Every peculiar complication, every special experience, and every new prescription would then be fresh in our minds. We would not be writing from the coldness and forgetfulness of time. Then, as we have just closed the heated season, in which are developed the bowel diseases of children, let me write now, for in that infant lies wrapped the future man.

No subjects come to me with a deeper interest, for through these comes a large proportion of infant mortality. We look for their bowel complaints as regularly as we look for the seasons, in all densely-populated districts, in large cities in the temperate zone, in the northern half of the United States, and in corresponding portions of Europe. The first week of high temperature that runs through day and night without abatement, these complications begin. In localities where the high temperature is not continuous day and night, there is no great prevalence of these diseases. In the cities where the breezes from the sea come at night and cool the atmosphere, there is not a high rate of mortality or sickness from bowel affections in young children; but wherever the reverse is true, and the night is not modified by the cool influences of neighboring oceans or seas, and the temperature continues high, day and night, for a period exceeding five or six days, you are certain to find a prevalence of these affections. It is not high temperature, merely, but continuous high temperature.

It is at this period that the bowel complaints of children begin to prevail. Teething is not the cause of these affections. As many children get teeth in January as July; and yet you cannot find a child dying with bowel complaints in January, but hundreds will be buried in July, and hundreds more in August.

Some think it is because they get bad vegetables; but it is not. They are not old enough to eat vegetables; they live on the mother's milk. This continuous high temperature acts upon the vaso-motor nerves to diminish the influence on the circulation in the membranous surfaces, both externally and internally, and puts into an atonic condition the vessels of the whole interior of the body. It is this impairment of the general force of affinity and this diminution of the activity of the vaso-motor nerves, that bring about the looseness of the bowels. Let me urge the necessity of mothers bathing their babies during these hot months. Bathe them regularly every morning and evening in water cool enough to act as a stimulus on the vaso motor nerves and induce a better tone in the vessels of the membranous surface; most especially bathe the spine.

Thermic diarrhœa is a form of disease which I have seen but few times in my experience of a quarter of a century. In this disease the heat and thirst are so intense that the little sufferer will grasp and drink with the utmost greed the bitterest draught. I have seen these little sufferers tearing the hair from their heads, the gums from their teeth, and actually chewing the ends of their fingers almost off; biting the nurse, scratching and clawing, moaning and crying, like some maddened wild beast.

This is not alone a thirst of the nervous papillæ of the mouth and fauces, showing a suppression of the salivary and mucous secretions. It is not alone a cry of the stomach; but it is a thirst, an internal sensation, an instinctive want arising from every organ and every tissue of the body. Such patients will die unless they are speedily relieved. To do this I strip and put them into a bath of warm water to their necks, administering every minute or two, as a drink, a teaspoonful of cold water, into a glass of which the white of an egg has been stirred, with the addition of a little sugar and essence of cinnamon. This, diligently administered, will give prompt relief and sweet sleep. These paroxysms may return; but they may be dispelled as before, and the child restored to health in a very few days.

When we consider that 16,000,000 of children under the age of five years die every year, we cannot be too earnest to know our business. One of the great necessities of our profession is to know our pathology, for without this we cannot expect to make a rational prescription, or to be crowned with satisfactory results.

W. O'NEALL MENDENHALL, M.D.

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Book Notices.

AN ABSTRACT OF THE SYMPTOMS, with the latest dietetic and medicinal treatment, of various diseased conditions. The food products, digestion and assimilation. New York: Published by Reed & Carnrick, 447 and 449 Greenwich street; 1891.

This is an account of the new preparations put upon the market recently by the enterprising firm named. Of the products placed in the hands of the profession previously by Reed & Carnrick, not one

has failed to come into general use and to win the commendation of the profession. Of those now presented some look very promising; others problematical; all are worthy of a trial. One of these sulpho-calcine, has been reported an exceedingly valuable local remedy in diphtheria, by a number of competent observers.

The Medical Digest.

TREATMENT OF DIPHTHERIA.—(From *La Pratique Journalière des Hôpitaux de Paris*).—See to the microbe, but do not forget the organism and its reactions.

I. Régime.—Make alimentation the object of constant preoccupation, and adapt it to the age of the little patient. Milk, eggs, soup, beef juice, can be absorbed in the liquid form, and should be given cold. Add to this alcohol, well diluted, to avoid irritating the stomach. If the children refuse nutriment, have recourse to the sound, and be sure that it has penetrated the stomach before pouring in the liquid.

The temperature of the room should not be below 64° to 68°, and should not rise much above this.

II. General Treatment.—Facilitate the elimination of the toxic products absorbed. These disappear from the economy by many routes. Some are retained or destroyed by the liver; others burned up by the blood; finally, the larger number are eliminated by the kidneys. We cannot act upon this function of the liver; to increase the destruction of the poison by the blood, increase the absorption of oxygen by causing this gas to be inhaled. We can act more easily upon the renal emunctory by milk, by the ingestion of liquids, and by caffeine, which we administer by the mouth or by the subcutaneous way.

III. Prophylaxis.—Three agents of disinfection: heat (in diverse forms), antiseptic liquids, and gaseous fumigations.

The most radical measure for the destruction of contaminated objects is their incineration. Have recourse to this in the freest manner. It will be easy, if one makes it the rule, to clothe the patient in linen of little value. This process being inapplicable for the sheets, pillows and mattress, etc., a means of certain efficacy to disinfect these objects is to place them in a stove with vapor superheated and under pressure. The temperature reaches 239°, and no germ, not even the bacillus subtilis, can resist such a heat. The stove of Eneste and Herscher is of practical value. Fifteen minutes suffices to purify an ordinary mattress, and twenty minutes to dry it, without doing it any harm.

In default of the stove, place the contaminated clothing in a liquid antiseptic. Of all the antiseptics proposed, the only truly efficacious ones are the phenols and compositions of that family, the cupric salts, and especially the mercurial salts.

—Bouchard.

I. Local Treatment.—Employ antiseptic douches with hydrocele syringe, or with an irrigator. Seat the child upon the mother's knees, a basin under the chin; bend it forward and hold its mouth open. Introduce the nozzle of the irrigator into the mouth, under the upper teeth, and inject from below upward. The liquid laves the tonsils and the pharynx, and escapes without entering the air-passages. Employ a solution of *coal-tar saponin* (liquor carbonis detergens?), prepared in strength to be diluted by

four parts of water when used. This is preferable to the solution of carbolic acid, 1 to 1,000, or the boric acid solution, 40 to 1,000. Recourse can be had to the sodium salicylate solution, 30 to 1,000; salicylic acid, 3 to 1,000; or resorcin, 10 to 1,000.

Repeat the antiseptic injection *every hour, day and night*. Besides, apply frequently to the swollen glands in the neck, iodized pomade, 6 to 100.

II. Internal Treatment.—An emetic at first; then, to prevent the infection, resorcin, in doses of 1½ to 3 or 4 grains, according to the age of the patient, given in 3 ounces of gummy julep.—Bouchut.

I. Local Treatment.—1. Continual pulverizations of carbolic acid in the sick-room, after the method of Renon.

2. Every hour or two, according to the gravity of the case, *irrigations*, by the mouth or by the nasal passages, with a salicylic acid solution, 1 or 2 to 1,000.

3. Frequent paintings of the affected parts (every hour or two, alternating with the irrigations), by the aid of a brush dipped in the following solution: Salicylic acid, 4 parts; alcohol, at 90°, 40; distilled water, 80. With this solution touch *frequently* the false membranes, but without scraping, so as not to excoriate the mucous membrane. More consistence can be given to this solution by adding alcohol, making it 1 part of salicylic acid to 10 each of alcohol at 60°, distilled water, and glycerine.

Internal Treatment.—Give salicylic acid in cachets, of 7½ grains, four times daily; for adults, give Todd's mixture, with the addition of 7½ or 15 grains of salicylic acid. For infants, use the following formula: 15 grains of salicylic acid to 4 ounces of Todd's mixture, with 4 to 8 drachms of brandy. Of this, a dessertspoonful every hour.—Henri Huchard.

Local Treatment.—Early sterilization of the false membranes is the first indication. The ablation of these, as far as it is possible, permits this sterilization to be affected more surely. The best parasitocides are tannin, carbolic acid, carbolate of soda and carbolated camphor. These parasitocides and antiseptics can not only be applied, but they can be absorbed from the pulmonary surface in the form of pulverized solutions and of vapors.

General Treatment.—Relieve the general condition by stimulants, to which may be added arsenic, given subcutaneously.

Prophylaxis.—The antiseptics, in vapor, can, in a certain measure, preserve the persons who care for the sick, and the children who cannot be banished.

—Constantin Paul.

Local Treatment.—Antiseptic paintings, pulverizations, gargles and irrigations.

Paintings, frequent, with olive-shaped brushes; a dry one first, employed with a certain force to detach the exudates should precede the topical application of the following: Salicylic acid, gr. xv; alcohol, q. s.; glycerine, 3x; infusion of eucalyptus, 3xijss. Repeat the painting hourly during the day. If the pseudo-membrane resists, substitute the following: Glycerine and perchloride of iron, equal parts.

Irrigations.—With each painting, irrigate with boric water, 2 per cent., or with lime water. For this employ a siphon, or better, a reservoir of glass, furnished with a tube. It is often impossible to employ irrigations with very young children.

Gargles.—These are only possible when the children are old enough. They should be of boric water or coal tar solution.

Pulverizations.—Useful for very young children, repeated 5 or 6 times a day, with carbolized water,

thymol solution, or tincture of eucalyptus. Produce antiseptics in the sick-room by carbolic spray or turpentine vapors.

Resolvent Pommade.—For the painful adenitis, employ this. Here we can use iodine pommade and belladonna.

R.—Ext. belladonnæ..... gr. xlv.
Potassi iodidi..... gr. xxx.
Petrolati..... 3j. M.

Régime.—Nourish the patient.

Internal Treatment.—1. Alcohol, 1 ounce to 1½ daily; cinchona, coca, and especially kola.

2. Give the perchloride of iron, gtt. x–xx hourly, or better, if the child is over twelve years old, try copaiba and cubebs in full doses:

R.—Cubebæ..... 3ij.
Copaibæ..... 3ij.
Ferri subcarb..... 3i.
Bismuth subnit..... gr. xv.

Divide into four boluses, to be taken during the day.

—Jules Simon.

Local Treatment.—Spray with the steam atomizer, or evaporate on an oil stove or an alcohol lamp, antiseptic solutions like the following: Thymic acid, gr. v; phenic acid, gr. xx; alcohol, gr. c; distilled water, 3xiv, gr. xxxv. Besides their antiseptic action, these sprays keep the air moist, and favor the detachment of the exudate.

Internal Treatment.—Prescribe the medicaments with indirect action, which cause elimination by the buccal glands. Such are the chlorate of potassa, benzoate of soda, and bromine.

R.—Bromi pur.... gtt. iv.
Potassi bromidi..... gr. viiss.
Syrupi..... 3j.
Aqueæ destillatæ..... 3v.

M. S.—A soup spoonful every two hours.

Use copaiba and cubebs only with reserve, on account of the gastro-intestinal irritation and diarrhœa that follow their employment —Sevestre.

Local Treatment.—1. Ablation of the exudates. Do this with the greatest gentleness, without scraping. Take away all the false membrane, but be careful to cause the least possible lesion; energy need not preclude tenderness. To clean the throat, give the preference to brushes of swanskin (*molleton*) with a cotton mop, or a pencil of soft horse-hair gathered into a brush.

2. Paint the bucco pharyngeal mucosa with the following mixture:

R.—Camphoræ..... 3v.
Ol. ricini..... gr. ccxxv.
Alcohol (90°)..... 3ijss.
Acid. carbolicæ cryst..... gr. lxxv.
Acid. tartarici..... gr. xv.—M.

The castor oil, soluble in the alcohol, gives an absolutely limpid material. Glycerine is a bad vehicle.

3. Repeat the ablation of the false membrane, and the application of the carbol-camphor mixture, every three or four hours; even oftener if the exudation is rapidly reproduced.

4. In the throat, employ, every two hours, carbolyzed irrigations that will carry away the pseudo-membranous débris, and, at the same time, afford an antiseptic state. With young children, who bear irrigations badly, practise them by force. Hold the child with the head bent forward, so that they will

not swallow the carbolyzed water. The mouth should be kept open by means of a bit of wood, forced between the dental arches. The pain is almost nothing.

5. With adults, in place of irrigations, employ carbolyzed gargles, 1 per cent.

Internal Treatment.—If general infection exists, give anti diphtheritic agents: arseniate of strychnine, and calcium sulphide.

Régime.—Nourish the patient.—Gaucher.

Practise ablation of the false membrane and touching the throat. The antiseptic liquid is carbolic acid:

R.—Acid. carbolicæ cryst..... gr. lxxv.
Camphoræ..... 3v.
Alcohol (90°)..... 3ijss.
Glycerini pur..... 3vj, gr. xv.—M.

Replace the oil of Gaucher's formula by glycerine; the inconveniences that the latter may cause are much less than those of the oil. In effect, oil will not *wet*, and, by varnishing the mucous surface, it prevents the penetration of the carbolic acid; besides, the solution is weaker.

Paint every three or four hours, according to the abundance of the membranes. Make irrigations of boric acid, 40 to 1,000. Repeat these vigorously every two hours, whatever the benignity of the diphtheria. Boric acid recommends itself especially by its harmlessness. Other solutions may be employed, provided they are not too strong, and that they have enough acidity. The diphtheritic poison has difficulty to accumulate itself in an acid medium; in all cases, the toxicity of its products is much less in an acid than in an alkaline medium. These irrigations or lavages act besides in preserving the cleanliness of the mouth and back of the throat.—Hutinel.

For Nasal Diphtheria.—Irrigate the nose with walnut-leaf water, or boric water. Apply a pommade of sublimed and washed sulphur, 1 drachm, to axunge, 1 ounce.

When the false membranes are located upon the lips, nitrate of silver, justly abandoned for pharyngeal diphtheria, answers well; in this case a light daily cauterization produces a good effect.

If the exudate appears on the skin of the cheek, where the child has had an excoriation, such as impetigo, employ a dressing of finely powdered iodoform.—Jules Simon.

DISCUSSION ON DIPHTHERIA.¹—*Diphtheria.*—A discussion on this subject was opened by Dr. Seaton, who said that the cases admitted into the hospitals of the Metropolitan Asylum Board came from all parts of London. He mentioned the case of a village near London—quite free from diphtheria—in which the construction of a new system of sewage was followed by a severe outbreak; he thought the disturbance of the soil might have led to the freeing of the germs. He said there was a strong ground for urging on Government the necessity for a systematic inquiry into the causes of the disease.

Dr. Schrevels, of Tournai, said the true origin and the cause of the spread of diphtheria could only be arrived at by examining carefully the results in different countries. In Belgium he had observed that diphtheria and typhoid fever ran concurrently—where one was severe, so was the other, and *vice versa*—but diagrams constructed from the statistical returns showed one exception, viz.: Eastern Flanders.

¹ Before the International Congress of Hygiene and Demography, London, August, 1891.

One was led to believe that the connection between these two diseases must be their origin from fecal matter, and the bacteriological researches of Löffler and Eberth agreed with this view. The exception in the case of Eastern Flanders also confirmed this, for the soil here was so humid that it was easily washed clean from all impurities.

Dr. Hewitt, of Minnesota, said diphtheria made its appearance in Minnesota about 1860, and was now the commonest cause of death but two, viz.: infantile diarrhoea and tuberculosis. Diphtheria started among the families settled on the banks of the great streams, and for some time remained a family disease; but later it spread to the higher plains, when the increasing business of the country led to increased intercourse. It was at first confused with ordinary tonsillitis and with scarlatina anginosa. Dr. Hewitt drew the following conclusions from the information he had been able to collect, viz.:

1. That from twenty to thirty years of age women were more liable than men—a fact which he accounted for by the contagiousness of the disease, and women being generally employed as nurses.

2. That forty-four per cent. of all cases occurred at or under five years of age.

Diphtheria in Massachusetts.—Dr. Abbott, of Boston, read an elaborate paper on this subject, at the close of which he drew the following conclusions:

1. That diphtheria is an eminently contagious disease.

2. That it is infectious not only by direct exposure of the sick to the well, but also through indirect media, such as clothing and other articles which have come in contact with the sick.

3. That the certainty of infection is not as great as in the case of some of the other infectious diseases, notably small pox and scarlet fever.

4. That overcrowding, faulty ventilation, and filthy condition of tenements favors its spread.

5. That the influence of defective plumbing is not proven.

6. That its transmission through public and private water-supplies is not proven.

7. That its propagation is favored by soil-moisture, damp cellars, and general dampness of houses.

8. That the poison may remain inactive in houses for a long period.

Dr. Adams, of Maidstone, presented a communication on "The Relationship Between the Occurrence of Diphtheria and the Movement of the Subsoil Water."

A Local Examination of the Difference in Susceptibility to Diphtheria Between Old and New Residents.

—Mr. Charles Paget, of Salford, then read a paper with this title. As the result of his inquiries, Mr. Paget said he found that as the people of a district were more subjected to the continuous influence of their insanitary surroundings, they were found less fitted to resist the infection of this disease. A shorter average period of residence elapsed before an attack of diphtheria was observed where the mortality rate was highest, and *vice versa*. The relative incidence of diphtheria during an epidemic period, in respect of length of residence, was thus dependent to no small extent on general sanitary circumstances.

Prof. D'Espine, of Geneva, Dr. Jaussens, of Brussels, and Dr. Escherich, of Graz, continued the discussion, and the opinion was expressed that local disinfecting measures were of great use in preventing the spread of the disease.

Dr. Thursfield, of Shrewsbury, said that he had long ago arrived at the conclusion that the ordinary

accepted ideas as to the etiology of the disease were one-sided and misleading. He believed that the failure of sanitary improvements to stop the increase of diphtheria was to be attributed to the dissemination of the disease by very mild, medically unattended, and therefore not notified, cases—generally acting through school agency. More importance should be attached to the fact that the chief influence favoring the incidence of the disease was personal susceptibility. He had, some years ago, in published papers, taken the view expressed by Dr. Hewitt, who laid considerable stress on the connection of the disease with damp houses. He had met with cases in which a very prolonged period of infection had been observed, and thought these might be explained by the fact that relapses might occur in diphtheria.

Dr. Tripe, of Hackney, said that, as the result of thirty-five years' experience, he had noticed that good drainage had but little effect in diminishing the virulence and extent of epidemics of diphtheria. The best method of preventing its spread was by destroying by fire all rags infected by secretions. He believed the disease was spread by contact, and had found that closing the play ground was as effective as closing the school.

Dr. Gunther, of Dresden, and Dr. Hubert also spoke, and a resolution was passed by the Section to the effect that it was extremely expedient that European governments should make a comprehensive and systematic inquiry into the causes of diphtheria.

LENNOX BROWNE confirms the statement of Coul-drey as to the efficacy of sodium salicylate in the milder forms of diphtheria.—*Journal of Rhinology*.

DE RUELE reports good results from the employment of the following in diphtheria:

B.—Cyanide of mercury gr. ¾
Alcohol at 80° ʒij.
Distilled Water..... ʒvj.

M. S.—ʒj every hour.

Improvement, manifest at once, is well established by the third day.—*Journal of Rhinology*.

IN DIPHTHERIA, locally, Marchand's peroxide of hydrogen and whiskey internally have established their value. A word in regard to the use of the peroxide: It should always be purchased in the smaller 4-ounce bottles, protected from the light by blue glass bottles and corked with rubber. That sold by the druggists from large bottles is, in the majority of cases, worthless. It is a very unstable article, and unless it causes immediately a white, foamy reaction when brought in contact with the false membrane, it should be discarded and another lot obtained. I am satisfied that I use it more freely and more persistently than most practitioners. I use mops made by twisting a sort of absorbent cotton upon sticks, using as many as thirty or forty in the twenty four hours. Such mops will take up nearly a half ounce apiece, and, when forced well back into the pharynx, reach all parts. The gagging and resistance of the child assists in the distribution of the fluid. As soon as a mop has been used it is committed to the fire. In this way I have treated the worst as well as the milder forms of diphtheria with complete success. I believe that the systematic use of definite, although often toxic doses, of whiskey even in children of tender age, are the surest safeguard against heart failure.

—Larabee, *Am. Pract. and News*.

NASAL DIPHTHERIA.—Nasal diphtheria has long been recognized as curable by local treatment, but not without it. The mucous tissue with its immense net of lymphatics must be constantly cleansed and disinfected. Thus absorption will be stopped, and the fearful cervical adenitis prevented or relieved, sometimes in a remarkably short time. In some cases, mainly those in which in the very beginning there is some bloody oozing from the nares, there is no lymphadenitis, because the poison is directly absorbed into the blood-vessels; in these cases also the favorable action of cleansing and disinfecting injections when commenced early is generally well established. I think it is now a recognized fact amongst us that nasal injections must be made early, frequently, and persistently. The greater the tendency to sleep the oftener is the child roused for injections. When the nostrils are obstructed by membrane, it becomes necessary to force a passage by means of a probe wrapped in cotton and dipped in carbolic acid, and keep it open. The liquids to be injected must be warm and fairly mild. Salt water (1.130), lime water, solutions of borax, boracic acid, benzoate of sodium, hyposulphite of sodium, bichloride of mercury (1.3,000–5,000) without or with chloride of sodium, sulpho carbolate of sodium, carbolic acid sometimes (1.200–500), and papayotin have been employed, once every half hour or every hour, in the night every two or three hours. We have learned at an early period that it is less cruel to wake a child from its stupor, than to let it die of sepsis. There are those who use salt water only, it having been their impression that the washing is of more actual effect than the use of disinfectants, with the exception of those cases in which the fœtor must be kept away from the lungs by desodorizers. For the purpose of washing the irrigator is generally avoided for fear of hurting the ear; we use small syringes with blunt and soft nozzles or sprays, the ends of which are covered with India rubber tubing, or spoons. It is acknowledged as a positive rule amongst all good practitioners, that no child must be taken out of bed for the purpose of injections, that the preparation, for the procedure must be made out of sight, and quickly but gently, in a recumbent or semi-recumbent posture. Soft ointments such as iodoform with glycerine ointment, are also applied by means of a brush.—A. Jacobi.

DIPHTHERIA.—The preventive treatment of diphtheria is a very important subject, and can not receive too careful consideration. If, as now seems certain, the Lœffler bacillus is the cause of the disease, and this bacillus finds lodgment in the great majority of cases in the fauces, it is reasonable to suppose that antiseptic washes used daily in the throats of those exposed to the disease will often prevent an attack. Sprays and gargles of boracic acid have been used for some time in several of the children's hospitals of New York, with the result of decreasing the number of cases of diphtheria. Complete isolation should be insisted on, the case placed in a room having good ventilation, and temperature kept as near 65° as possible. No unnecessary furniture should be retained, and the floor and walls should be washed with a solution of corrosive sublimate of a strength of 1 to 2,000, and all soiled clothes should be placed in a solution of the same, for which purpose the strength need not be more than 1 to 10,000. Privies, drains and utensils should also be disinfected with the solution.

The treatment of the disease naturally resolves itself into two kinds, local and constitutional.

Without discussing the innumerable remedies and specifics used by the profession, I shall content myself with giving the form of treatment I have seen used in the hospitals for contagious diseases in New York, and which I have used in my own practice with excellent results.

For the swelling of glands of the neck I apply flaxseed poultices, and have them changed every two hours. Spray the nose and throat every half hour, or as often as possible without exhausting the patient, with a 1–4,000 solution of bichloride of mercury, and after each spraying administer one to two teaspoonfuls of the following:

R.—Potass. chlorat.....	3vj ðij.
Tr. ferri chloridi.....	3iiss.
Glycerini.....	3vj.
Aquæ.....	3iv.

Steam spray with five to ten drops of spirits of turpentine every hour. Instead of the spray of bichloride I have seen a glass syringe used with which three or four ounces of the solution of bichloride, 1 to 4,000 was injected, and though children from three to ten years of age swallowed over a quart in twenty-four hours, the only effect noticed was to cause them to vomit, no poisonous symptoms ever developing.

Whiskey is given according to indications, where the pulse is intermittent or shows signs of failing, an ounce every hour or oftener. For a tonic an elixir of iron, strychnine and quinine, and if the urine shows the presence of albumen, a diuretic of bitartrate of potash and gin; for suppression of urine, cupping and digitalis poultices.

When the false membrane involves the larynx and there is danger of suffocation, either tracheotomy or intubation is indicated.

—Buckley, *N. W. Lancet*.

COLCHICINE is rarely presented, but Dr. C. D. F. Phillips has furnished me with the following formula, which he has found useful in the treatment of gouty neuritis and allied affections:

R.—Colchicine.....	gr. 1–60.
Sulphate of quinine.....	gr. i.
Extract of colocynth.....	gr. i.

To make a pill, one to be taken three times a day.

—Murrell, *Hospital Gazette*.

CELASTRINE.—In seeking to compare the action of celastrine with that of drugs previously known, it must be admitted that its effects are similar to those of cocaine. Celastrine, however, is in so far the more energetic that it is mortal in amounts in which cocaine is merely excitant. It has, in common with cocaine, stimulation of the brain, augmentation of temperature, and deleterious effects, due to its abuse. It differs by its extremely bitter taste and by the fact that in intoxication from celastrine, sensibility is preserved to the last, that convulsions are lacking, and that, although the animals may experience more agitation, they retain the government of themselves, and the organs of vegetative life continue to perform their functions.

The stimulant effect of celastrine is essentially manifested upon the brain without leaving a trace of depression or visible disturbance of function. The prominent symptoms in the subjects of experiment were agitation and increase of temperature, which remained elevated even in the absence of movement. The spinal cord, vagi nerves, and heart may share the stimulant effect, but are less powerfully affected.

—Mosso, *Med. Press*.

AN EPIDEMIC OF TUBERCULOSIS.—M. Arthaud said that out of 35 workmen employed at the Electric Lighting Works in Paris he had found that 32 were phthisical, and of which latter number 23 had been affected since they had entered that workshop. He reminded his colleagues that he had already pointed out, in the Congress for the Study of Phthisis, the danger of tuberculous contamination in workshops when the sojourn exceeded a month.

—*Med. Press and Circular.*

At the New York Polyclinic, a few days ago, Dr. Wyeth gave the history of a case of intussusception of the bowels that had come under his observation, and he endeavored to impress upon the physicians present the importance of early operation in such cases in order to save life. He said it reminded him of a history of Patrick Henry he had just been reading. Patrick Henry is supposed to have had intussusception. The attending physician purged him, without producing any effect. At last he brought in a large bottle of liquid mercury. When the patriot and statesman saw it he said his prayers, swallowed the dose of mercury, and promptly died. Surgical interference, Dr. Wyeth concluded, might have saved him. George Washington, who is said to have died of œdema of the glottis, might perhaps have had his life prolonged by any surgeon who was competent to open the larynx.—*Med. Age.*

TRANSFORMATION OF THE SMALL-POX VIRUS.—At the Académie de Médecine M. Chauveau read a long paper on the relations existing between small-pox and vaccine as regards the transformation of the virus. He said that the idea that vaccine was only a transformation of small pox continued to obtain a large number of partisans. He, on the contrary, believed that the virus in both cases proceeded from the same origin. It was true the absolute proof was not yet established, but that they were distinct affections he did not doubt. Attempts were made by a Lyons committee to transform human small pox into vaccine by inoculating cows, but the virus remained the same as to its nature even after several cultivations, consequently it must be accepted that the simple passage of pox virus in the organism of the cow or horse is entirely incapable of changing this virus into vaccine. Vaccine never produced small-pox in man, nor did human small pox ever become vaccine when inoculated into animals. Vaccine is not, consequently, an attenuated small-pox.

DELIRIUM OF PNEUMONIA.—Castelain's observations lead him to the following conclusions:

1. The appearance of the delirium coincides with the beginning of the period of liquefaction, and is its first indication.
2. The curve of the delirium is parallel with the curve of liquefaction, and of the abundance of the exudation. The delirium increases during and after defervescence of the fever, in proportion as the râles become more moist and more numerous, and as they extend over a greater area. The delirium diminishes and disappears, little by little, in proportion as the fine râles become less numerous, occupy a less extensive area, and give place to coarser râles and finally to dry râles.
3. The duration of the delirium is in relation with that of the liquefaction of the great mass of the exudate. If the latter is liquefied rapidly and disappears immediately from the alveoli, the delirium is of short duration, but is more violent than when resolution

occurs slowly or in different regions in succession. Delirium may even be entirely absent when liquefaction is slow, or the exudation slight.

—*Jour. Am. Med. Asso.*

TOBACCO AMAUROSIS.—The external appearance of the eye is normal; but now is presented the sphere in which the ophthalmoscope obtains its highest achievements; its revelations are uniform, distinct, and characteristic. In a typical case there is first, hyperæmia, congestion of the optic disc. This stage is rarely seen, for vision has not yet become so much impaired as to excite alarm. In the second stage, gray atrophy, the congestion has disappeared; the bifurcations of the central artery are diminished, and the temporal portions of the disc begin to assume a grayish hue. In the third stage, white atrophy, the vessels become few and attenuated, and the disc becomes of a whitish color; all the dioptric media are in no degree involved, retaining their transparency throughout.

The cause of failure of vision resides in impairment of the nervous structures of the elements of the optic nerve, near their entrance into the globe, in their course or at their manifold sources of origin. This is generally due to pressure exerted by the increase of the neurilemma of the optic nerve fibers within the unyielding optic nerve sheaths. At first it is a functional disease, but it becomes organic, if pressure continues for a sufficient time, until granular degeneration of the fibers has taken place.

—*Dickinson, Weekly Med. Review.*

SPURIOUS COXITIS OF A VERY TUBERCULAR CHARACTER.—A physician brought his son—a bright boy—from Texas. In correspondence he had reason to believe a violent case of coxitis in third stage and of tubercular origin, since there was no traumatic history. The doctor and his son took a room in St. Mary's Infirmary and examination took place, Dr. John W. Vaughan assisting, in the presence of a section of the senior class. Both in walking and on the table the patient presented the left limb in a bent position at both hip and knee, with increased inclination of pelvis and considerable lordosis of lumbar portion of spine. The extremity was not much lessened in size. These two circumstances rendered the diagnosis of coxitis problematic, although there was some swelling and excessive tenderness about the hip. Digital re-examination of pelvic cavity disclosed no deviation from the normal. It seemed as if there was deep-seated fluctuation about the hip, but upon deep incision nothing was found. Under chloroform there was no difficulty in extending the extremity, and to move it in any direction without any increased friction in the joint or contraction of muscles. The movement of the head of femur was perfect in the acetabulum. When fully extended and placed in plaster dressing with leather splints, the limb was both normal in position and length. These conditions disposed of the idea of coxitis and *tuberculosis*. The patient, the fourth day from proceedings rested perfectly comfortable and free from any disturbance. In a few days he will return home, with Thomas' splint to prevent any incidental motion of part concerned.—*Bauer, St. Louis Med. and Surg. Journal.*

SEVESTRE has latterly observed some examples of a special variety of stomatitis, which is characterized as follows:

It first affects, and often in an exclusive manner, the internal surface of the lips, sometimes, also, cer-

tain points of the buccal mucous membrane. It gives rise to white plaques of diphtheritic appearance, which are confused with the mucosa. It is generally cured in six or eight days, and presents no indication of gravity.

This stomatitis is especially observed in debilitated children, whose general nutrition is more or less defective. It is particularly frequent in occurrence at the end or during the course of measles and whooping-cough, but may be observed independently of these complaints.

It coincides frequently with chronic coryza, and especially with impetigo of the face.

This affection might be confounded with ulcero-membranous stomatitis, and especially with a manifestation of diphtheria.

Ulcero-membranous stomatitis is distinguished by its special localization (on the free edge of the gums, and the inter-maxillary region of the cheek) and by the characteristic foetidity of the breath. The diagnosis from diphtheria is more difficult, but there is a certain number of characters which lead to its distinction. Impetiginous stomatitis remains always localized on the buccal mucosa, without extending beyond the free edge of the palatine arch; this is scarcely ever the case with diphtheria. The eruption of the plaques occurs simultaneously, and the progressive invasion is not seen which characterizes diphtheria. Lastly, these plaques are intimately adherent to, and cannot be separated from, the mucous membrane without tearing it. A more peremptory reason for distinguishing diphtheroid stomatitis from diphtheria is found in the bacteriological examination. In all cases seen yet, Gaston and the author have found almost exclusively present the staphylococcus pyogenes aureus. This appears to demonstrate conclusively the nature of this variety of stomatitis. We may go further and ally this variety of stomatitis to impetigo. Cultures made with the products of impetigo have demonstrated the presence of the same micro-organism (the staphylococcus aureus).

—*Journal of Rhinology.*

ANÆSTHETICS IN LABOR.—We sometimes hear enthusiasts declare they give anæsthetics in every stage of labor. Conservative men ask: "Why give anæsthetics in the first stage, or, at least, in the first half of the first stage, or the third stage at all?" If chloroform is administered early in labor, or about the middle of the first stage, it will, in a large majority of the cases, retard labor and thus prolong the suffering. Its effect upon the abdominal muscles is to lessen the contractile force, and thus retard the beginning of the second stage. My observation has been, if chloroform is given at all in the first stage in sufficient quantity to satisfy the patient, or control the pain through the first and second, a majority of such patients will have to be delivered with the forceps, for want of power to accomplish what nature would have accomplished if not interfered with; or that chloroform must be abandoned to allow nature to do her work. My practice, for years, has been not to give chloroform in the first stage of labor, unless there is abnormal or almost continual severe pain; in such cases, chloroform will not only lessen pain but cause longer intervals of rest, and allow nature to accomplish the work of dilatation, and thereby sooner be prepared to enter upon the second stage, pre eminently the most interesting and anxious period in the whole process of accouchment. I would give morphine or chloral where the pain is too severe or harassing, and dilatation slow—then wait. I am

satisfied, by experience, that a too early use of chloroform insures a too frequent use of the forceps; yet I know the humanitarian cry will come: Use the forceps, then, and cut short the agonizing anguish and suspense. That, doubtless, would be well, all things being equal, when the forceps are in the hands of a skilful operator. But all physicians are not skilful operators, no more than all physicians are good surgeons; yet I am happy to believe there are more skilful physicians in both sexes to-day than in any other age of medical history. While, I repeat, my opinion is that a too free use of anæsthetics in labor calls for a more frequent use of the forceps, nevertheless, in this age of progress and civilization, with our delicately-organized and intellectually-refined American women, whose whole being tingles with delicate filaments of sensitive nerve fibers, which compel us to use whatever science has contributed to the relief of a suffering parturient, we must act. The time has gone by when an accoucheur can sit by the bedside of such a patient and indifferently listen to her cry for relief. He must afford her relief as readily as he would were she suffering with the toothache or any other bodily pain that is in his power to relieve.

—Hendrixson, *Columbus Med. Jour.*

HIP-JOINT DISEASE.—It is strange, yet nevertheless true, that orthopedists have not agreed upon the *exact* treatment of this disease. Some rely upon extension, others fixation alone, and some, considering the disease tubercular in the beginning, excise the joint. Whatever we may believe to be the correct method, the acme of our efforts is to check the inflammatory process, to maintain mobility, and prevent deformity. Thus, a few months since I was consulted with reference to a boy, aged nine years, who presented a marked deformity of the left limb, viz.: fixation of the caput femoris upon the rim of the acetabulum, extreme flexion of thigh upon pelvis, leg upon thigh, abduction, external rotation and compensatory lordosis of lumbar vertebræ. Examination determined ankylosis of hip joint, and contraction of tensor vaginæ femoris. From the mother I learned that the patient had suffered from the usual symptoms of morbus coxæ, and had been under treatment in a hospital for a whole year with the stated result.

The extension method (adhesive strips, pulley and shot bag) had been applied. Whether this treatment was responsible for the result or not, I will not presume to say, though I must confess, that I cannot appreciate how fixation of the joint can be maintained by this plan. An effort must now be made to correct the deformity.—Bauer, *St. Louis Clinique.*

LATERAL CURVATURE.—If the orthopedic surgeon was compelled to rely upon the numberless contrivances now in force, for the relief of rotary lateral curvature (scoliosis) of the spine, he would indeed be in a quandary. Their object and aim seems to be the correction of the lateral deflection from the vertical axis. Few of them have in view the correction of vertical rotation. In the majority of cases the latter is the potent problem which confronts us. A recent case of a girl eleven years of age demonstrated the advantage of relying upon manual manipulation as the most feasible corrective measure.

WRY-NECK.—The cause of congenital wry-neck still remains one of the unsettled problems. Stromeyer's view, which has been generally adopted, that rupture of the sterno-cleido-mastoid occurred at birth,

is once more contradicted, and the opposition fortified by an exhaustive review by Ferdinand Peterson.

The latter maintains the view, which he originally propounded, that congenital wry-neck occurred most frequently where there was a deficiency of amniotic fluid, and breech birth. His evidence seems to be reliable and convincing.

Medical News and Miscellany.

MILK is said to be a good dressing for burns.

WOMEN are much more tenacious of life than men.

DR. LEFFMANN has withdrawn his resignation as Port Physician.

WHITE of egg is said to be an efficient application for sore nipples.

DR. H. M. COX, of Easton, has been pardoned by Governor Pattison.

A HAVERFORD COLLEGE student died, this week, of cerebro-spinal fever.

DIPHTHERIA and scarlatina are said to be rife in the town of Harding, near Pittston, Pa.

CHOLERA is committing great ravages at Damascus and in Hodeida, a port of Southern Arabia.

CANADIAN trains are to be inspected at Detroit and Port Huron, to prevent small-pox importation.

IN France the law provides that the person who summons a doctor thereby makes himself liable for the fee.

MR. ROSE removed the Gasserian ganglion at King's College Hospital, October 29, before a large gathering of students and visitors.—*English Exchange*.

FRANCE is evidently no longer to be classed among the effete, since it is a republic. A Parisian woman has just given birth to an infant weighing twenty-three pounds.

JEFFERSON'S ALUMNI gave a dinner, last Tuesday evening, in honor of the election of Profs. Longstreth, Wilson, and Hau. Addresses were made by Weir Mitchell, Wm. Pepper, E. P. Davis, and others.

DR. FREDERICK states that he has never had a second case of scarlatina develop in a family when digitalis has been taken as a preventive. Many able practitioners credit this drug with specific virtues in scarlatina.

THE entries of students at the English medical schools foot up to 1,088 for the full curriculum, 117 dental, and 446 special course. Spite of the dirt, Guy's takes the lead with 161, while Firth College, at Sheffield, brings up the rear with a class of 16; not enough to be announced as "encouraging," by a prairie + roads school.

THE Board of Health has dismissed the protest of neighbors against the proposed annex to the Children's Homœopathic Hospital for contagious diseases. It may not be pleasant to have scarlatina and diphtheria for neighbors; but the inalienable rights of American citizenship remain, and they can move.

GELSEMIUM is said to be an efficient remedy for toothache; at least, for the non-inflammatory varieties. Fifteen minims of the tincture, with two grains of quinine, are given every hour for three doses if required.

AND NOW IT'S THE DRUGGISTS' TURN.—The *British Medical Journal* says that the Municipality of Seville has decided to establish two public pharmacies where poor patients may have prescriptions made up for nothing. The local druggists are up in arms against the proposal.

BETWEEN dictators, revolutions, and disease, Brazil is having an unhappy time. Ceara had 600 cases of small-pox on November 15; at Santos the hospitals were full of yellow fever patients, and 60,000 people had been lost by disease and emigration by Bahia, on account of drought.

A SIGN on a South Nineteenth street house reads:

EXPERIENCE NURSE.

For the sake of her patients, we trust that her knowledge of her profession is not so meager as her acquaintanceship with English.

THERE appears to be quite a serious misunderstanding between the *Lancet-Clinic* and a prominent Cincinnati physician, owing to an interview with the latter published in the *Times-Star* of that city, followed by another item of objectionable nature so closely that the two were supposed, on cursory examination, to be one article. No blood has yet been spilt, and we trust that none will be. The physician in question has considered the matter of sufficient moment to warrant him in clearing himself by an affidavit.

THE first number of *The Texas Sanitarian* lies on our table, Dr. T. J. Bennett is the editor. If this be a fair specimen of what the journal is to be, it is one that any State may be proud to own. But the editor strikes a terrible blow at individual freedom. He nullifies the glorious Declaration of Independence, when he strikes at man's most devoted retainer, the dog. "There is one sanitary evil, a source of great danger to human life and happiness—a standing menace to society, which, however, seems never to have occurred, either to our own sanitarians or our law-makers—the dog." Never mind, Rover, old boy, we'll take our stand on your record as giving your life-blood to protect your master against tuberculosis; and if that be disproved, we'll die a little sooner, but hold fast to our dog.

APPLIES TO DOCTORS ALSO.—The druggists of the State of Colorado have held their second annual meeting, and again demonstrated the fact that they are looking after the professional as well as the trade aspects of their calling. There is one feature of their meeting to which we would like to direct the attention of the members of other local organizations. We refer to the number of papers describing drugs and chemicals indigenous to the locality of Colorado. If each State would take up this line of work we would soon have a fund of information added to the literature of American pharmacy, which would be appreciated the world over. The members of the American Pharmaceutical Association have done something in this direction by writing up local pharmacy in California when the association met there, and again describing local medicines in the South at the New Orleans meeting.—*Meyer Bros. Druggist*.

WEEKLY Report of Interments in Philadelphia, from November 14 to November 21, 1891:

CAUSES OF DEATH.		Adults.	Minors.	CAUSES OF DEATH.		Adults.	Minors.
Anæmia	2			Inflammation bladder.....	1		
Alcoholism	1			" brain.....	1	9	
Apoplexy	14			" bronchi.....	6	9	1
Asphyxia	2			" kidneys.....	6		
Bright's disease.....	19	1		" larynx.....	1	1	
Burns and scalds.....	1	2		" liver.....	2		
Cancer	16			" lungs.....	28	12	
Casualties	5			" pericardium.....	1	2	
Cerebro-spinal meningitis..	1			" peritoneum.....	4		
Congestion of the brain.....	1	2		" pharynx.....	1		
" lungs.....	2			" s. & bowels.....	10	2	
" liver.....	1			Insanity	2		
Collapse of lungs.....	1			Mania a-potu.....	2		
Cholera infantum.....	3			Marasmus.....	14	14	
Cirrhosis of the liver.....	3			Old age.....	14		
Consumption of the lungs.....	44	8		Œdema of glottis.....	1	1	
" throat.....	1			Paralysis.....	8	1	
Convulsions	18			Pyæmia	1	2	
Croup	11			Rheumatism	2		
Cyanosis.....	4			Shock	1		
Debility.....	5	3		Scrofula.....	1	1	
Diphtheria	2	37		Sore mouth.....	1	1	
Disease of the brain	1			Softening of the brain	2		
" heart.....	25	6		Suppression urine.....	1		
" liver.....	1			Suicide.....	3		
Effusion of the brain.....	1			Syphilis	1	1	
Enlargement of the liver.....	2			Tabes Mesenterica.....	1	1	
Fatty degeneration of the heart.....	4			Tetanus.....	1		
Fever, remittent.....	1			Tumor	1	1	
" scarlet.....	1	11		Uræmia.....	5	1	
" typhoid.....	7			Whooping cough.....	3		
Hemorrhage.....	1			Total	263	177	
Inanition.....	3						

THE Canton of Basle, in Switzerland, has recently voted free medicine and medical attendance to every citizen with an income less than 12,000 francs (\$2,400).

ONE of the most blatant and assuming of Philadelphia's many quacks lately made an amusing blunder in the English of his highly-colored advertisement. His purpose was to call attention to the huge figures following, relating to the number of his cures, and then to draw the proper deductions; but his clairvoyant knowledge of the mysteries of our tongue is evidently not commensurate with his ability to diagnose disease without looking at or speaking to the patient; for the advertisement runs: "Note the enormity of his experience, and doubt if you can the secret of his success."

THERE WAS URINE IN IT.—A dispensary patient, whose sufferings from gravel were partly real, but also hypochondriacal, came to the dispensary one day looking twice as lugubrious as usual, and told me that all the previous day he had been passing blood, water, and urine. "The way I know this," he continued, "is, because the night before last I was at my lodge, and while there passed some water in a cup. A young man from Blank Medical College, who happened to be there, looked at it and said there was urine in it. 'How do you know?' I asked. 'I smell it,' he answered."

THE following is told of the Professor of Surgery at Edinburgh: In the course of a clinical demonstration he turned to a student who had just commenced his studies, with the question: "Now, sir, can you tell me what is wrong with my dressing?"

The ingenious youth turned red, and preserved a discreet silence. Mr. Chiene, however, was not to be put off, and repeated the question.

After a long pause the youth stammered out in a fit of desperation: "Well, sir, if you insist on my telling you, I should say your tie is not quite straight."

As might be surmised, this unexpected answer quite "brought down the house."

DUBOISIN AS A SEDATIVE AND HYPNOTIC.—Ostermayer regards the sulphate of duboisin as superior to hyoscine in not having the inconveniences of the latter drug. It is chiefly a hypnotic, producing sleep in from twenty to thirty minutes, and is to be given in doses varying from one to three milligrammes, according to the character of the case. It is said to produce no dangerous or disagreeable symptoms, and although continuous use produces tolerance, by leaving it off for a short time the full effect can be again obtained.

THE monthly meeting of the Camden, N. J., City Medical Society was held on Thursday evening, November 12, 1891, with Dr. H. F. Palm, the President, in the chair. After the transaction of routine business, which consisted of receiving propositions for membership from several physicians, and the consideration of the plan for opening of the new dispensary, which is to be completed next month, the more serious business of the evening was entered upon, which was the reading and discussion of Dr. Daniel Strock's paper on Diphtheria. The interest shown in this subject was evidenced by the animated discussion that ensued, in which nearly every member took part.

The following were present: Drs. H. Genet Taylor, D. Benjamin, A. M. Mecray, W. H. Iszard, W. Shaefer, G. T. Robinson, J. S. Baer, J. H. Frick, J. Osman, J. R. Ridge, A. McAllister, B. S. Lewis, E. L. B. Godfrey, S. Presley, N. Davis, E. P. Townsend, J. F. Leavitt, W. H. Ireland, J. H. Wills, O. B. Gross, O. W. Braymer, H. F. Palm, W. A. Davis, D. Strock, F. Haines, H. A. M. Smith, of Gloucester, and H. M. Sherk, of Cramer Hill.

There have been over 500 cases of diphtheria in Camden since November 1, 1890.

DR. L. MARQUARAT, sworn chemist, Hamburg, says in a treatise "On Meat Preparations:"

"It will be evident that a meat product must embody the following properties in order to possess the merit of a complete, readily digestible and concentrated meat food:

"It must contain all the constituents of the beef. They should be in a state of fine subdivision. The albuminates must be present in a great measure in the form of peptone. The fat should be finely emulsified, in order to be readily absorbed. The product must prove permanent on storing. Finally, the pleasant taste must not be sacrificed in the process of manufacture.

"These requirements are fulfilled by Mosquera's Beef Meal in a full measure, and it is therefore calculated to occupy a conspicuous position amongst dietetic nutrients, and so render important service to medicine, aside from the fact that it may be employed as a perfect substitute for fresh meat where the latter is not procurable."—*Med. Age.*

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The Times and Register.

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Original Articles.

THE WORK OF MEDICINE FOR THE WEAL OF THE WORLD.¹

IT is gratifying to the humanitarian student of scientific medicine to note the amazing progress lately made in knowledge of the human organism, and in resources for its regulated control in health and disease.

Since Democritus, in that classical garden at Abdera, made one of the earliest dissections, to learn thereby, if possible, the morbid nature of melancholia, such strides toward a knowledge of the nervous system and its diseases and their treatment have been made as would have impressed the physicians of antiquity with the belief that their modern brethren were sorcerers and charmed men bearing charmed lives. Much of this has taken place within the past three decades, for when I entered the profession but little, compared to now, was known of the wonderful mechanism and normal function of the nervous system and its not less astonishing morbid manifestations, as we study and treat them to-day. True, the astonishing anatomical discoveries of Sir Charles Bell and of Claude Bernard into the intricate function of the nervous system, which, with the amplifications of Solly, Abercrombie, and other anatomists of the brain and spinal cord, and the contributions of our own Brown-Séquard, then an American and the pioneer neurologist of our country, and foremost in the world, had already attracted the attention of a few medical savants; but not an American or European school had then a chair of Neurology or Psy-

chiatry, though Rush had, nearly half a century before, clinically described some mental diseases in the Pennsylvania Hospital in advance of all the world across the sea, and his descriptions have been lately verified, approved, and re-affirmed at home and abroad as evidence of our present advance in neurology.

Notwithstanding the great discovery of Sir Charles Bell respecting the spinal nerves had long before been announced to the world, the diseases of the sympathetic nervous system were then scarcely known, and are only now beginning to be generally recognized and studied. True, the great works of Rokitanski, and Koliker, and Trousseau, were before the world; the great, the venerable Virchow was fast winning converts to his cellular pathology; the fame of Charcot as a great clinician was rapidly spreading, and Romberg had written a work on nervous diseases destined to endure; but neurology, as a special department of medical study, was not then much considered by the profession at large, though Charcot and his European confrères had begun to bring it into the special prominence it has since acquired. Graves and Marshall Hall, Solly and Abercrombie, Stokes and Skoda, had made their everlasting impress on the profession. The treatment of fevers had been placed on a rational basis, and the science of physical thoracic exploration and descriptive anatomy were almost as perfect then as they are now.

Velpeau, Civiale, La Rue and Nelaton, Mott, Mussey, Mütter, Stone, McDowell, and Pope, with the rising Brainard, of Chicago, and the surgeons of Great Britain and Germany, had made, or were making, the surgery of the middle third of the nineteenth century lustrous and renowned. The work of Corvisart had become common property; the cell doctrine was being taught; ether and chloroform were in use, and Bastian and his colleagues were

¹ President's Address, read before the Seventeenth Annual Session of the Mississippi Valley Medical Association, St. Louis, October 15, 1891.

vigorously and with plausibility contending for spontaneous generation against the old, but now reaffirmed and firmly-established maxim, "*Omne vivum ex ovo.*"

The classical and revolutionary psychiatry and psycho-physiology of Maudsly, the psychology of Herbert Spencer, and the discoveries of Ferrier, had been only dimly foreshadowed in the theoretical misconceptions of Gall and Spurzheim, and in the discovery of Broca's speech center in the third left frontal convolution of the cerebrum. Aphasia was then only known as the *alalia* of Lordat—an indifferent condition of the brain affecting speech without involving the intellect, and the great contest between Broca and Aubertin before the Anthropological Society of Paris, that determined the beginning of cerebral localization as a fact of physiological science, had ended in Broca's surrender and later triumph. It is true that Pinel had already broken the shackles of the fettered lunatics of Bicetre, while Chiarugi had done the same for the chain-bound and imprisoned insane of Italy. The elder and the younger Tuke, of England, were practising and proclaiming humanity to these unfortunates in the pioneer land of the *Magna Charta* and *habeas corpus*; and Combe had said and proved that insanity was a disease and not a satanic possession, nor a proof of the anger of the gods; yet, in the profession at large, comparatively little was understood of insanity, or nervous diseases in particular. At that time, to be afflicted with many now well-known diseases of the nervous system, was to be dismissed by the physician, without attempt at treatment, as only nervous; and the unfortunate subject of hysteria, often regarded as a she-devil, who might do better if she would, because a dash of cold water in the face or down the spine brought back to its unfortunate victim the latent, abdicated, or dormant volitional control of the higher over the lower rebellious and riotous nerve centers, got but little sympathy. Epilepsia, too, was still in the minds of some physicians, and more laymen, the *Morbus Sacer* which no mortal could control; while chorea still retained the name of the patron Saint Vitus, who was supposed to have the power to stop the grimaces and jerky movements—and sometimes diabolical dance—of this psycho-motor and motor-center disturbance.

Brown-Séquard, and that Manchester physician, whose name I cannot now recall, who preceded him in the use of the bromides, have helped us to dispel many a theological delusion through therapeutic resources.

How unfortunate that the profession had not possessed them and the knowledge we have of their therapeutic power in the time of Cotton Mather, and of the convulsionaries of the middle ages.

It was before our day that Bayle and Calmiel described the general paralysis of the insane, and Prichard that of moral insanity; but it is only in your day and mine that they have come to be recognized as distinct morbid conditions of mind, though now often differently designated as paresis, parietic dementia, dementia paralytica, affective insanity, paranoia, etc.

In our day, imperative conceptions, morbid impulses, the *folie de toucher*, and the *folie du dout*, of the French, or the mysophobia of Hammond, and the numerous pathophobias of Beard, are studied as conditions requiring medical aid; and insomnia, as the symptomatic portentous expression of a functional or grave cerebral disease, and constipation in certain persistent forms, as a nervous disease, are just now

being studied and treated in a more judicious manner than even ten years ago. The judicious physician no longer contents himself, or satisfies his patient, with only a hypnotic in the one instant, or a cathartic to empty the sewer which soon fills again, in the other. These are but temporary expedients. Any druggist, especially if he be rash enough (and many of them have no lack of that therapeutic confidence which is always present where knowledge is least), can do this.

These patients require, in addition to temporary relief, rested and restored brains, and a re-invigorated sympathetic nervous system, especially in that of one or other of their great splanchnic cavities.

Neurasthenia, or, as I have called it, general functional neurasthenia (a term expressive of its cause), has come to light in my time. Doctors VanDeusen, of Kalamazoo, Michigan, and Beard, of New York, who were the first of all modern observers to describe it, were personally known to me, the latter at the time his first paper was published on the subject; and oh, what a world of woe has been saved to man and woman by the discovery—especially to woman! To be weak, exhausted, and unstable in one's nervous system, is to be miserable; but to be thus miserable and unappreciated by both laymen and physician, as these persons were before it was known that people might be exhausted in their nervous systems without an appreciable local disease, was pitiable in the extreme.

The doctor, searching for a *locus morbi*, and finding none in heart or lungs, liver or other of the viscera, and none in the brain or cord, or at least nothing deemed adequate to the general nervous weakness, and, perchance finding in poor woman some slight local displacement or catarrh, or, perhaps, even an ulceration, or some ovarian tenderness, a part of the general hyperæsthesia, or an ovarian congestion that was but part of the lowered vasomotor tone which allowed of arteriole failure of control and vascular fullness there, as elsewhere, in the organism, too often too hastily saddled, all the blame on the disordered but unoffending organ, "more sinned against than sinning;" and attacked with knife, cautery, or mechanical scaffoldings, the local part for the physiological fault of the whole. The violence done to confiding woman in the name of surgical therapy, the needless mutilation of her special anatomy in the name of surgical gynecology, are not yet fully appreciated; but thanks to the spreading light of neurological truth, the clitoridectomies of the past, the oöphorectomies and hysterectomies of the present, except chiefly for real local surgical cause, are likely soon to be relegated to the surgery of the more barbaric past; and normal ovariectomy for distant neuropathic perversion will no longer be a recognized surgical procedure. Enlightened gynecology, enlightened surgery and neurology, are now agreed to this.

Knowledge broadens with enlarging surgical skill. To be only a good cutter is not now regarded as necessarily the best of surgical counselors, and in the practice of surgery caution and conservatism have come to be regarded in the profession as the proper accompaniments of boldness and skill with the knife. Surgery learns caution and conservatism from widened experience, just as therapeutics has learned that the hypodermic syringe is a dangerous implement when unwisely handled, or just as obstetrics has learned that the forceps may be too handy and applied too often.¹

⁽¹⁾ On the latter subject the *Centralblatt für Nervenheilkunde* reports the investigations of Winkler and Wallen to the end that the forceps in delivery was a more frequent cause of idiocy than was commonly supposed. In a *post-mortem* ex-

Medical progress within the last few years has been especially gratifying, aside from having exceeded that of many years before in the many therapeutic discoveries already mentioned, most of which have been made within the past five or six years, such as the coal tar analgesics, hypnotics and Liebrech's cantharadinate of potash.

We have the discovery of Morvan's disease within the past eight years, the elucidation of syringomyelia and recently the approximative identification of the two as probably Morvan's and Maries' varieties of the same disease, the discovery and differentiation of neuritides from the ataxias and clearer descriptions of paranoia. The first account of that singular trophoneurosis of the bony system, acromegalia, discovered by Marie, was made in 1866, and Salemi Pace has cleared up the subject of astasia and abasia, under the title of "Partial Spinal Amnesia," so late as 1888.

But it would weary you to give a full detail of progress, even in the department of neurological medicine, made within the past year.

Let me just epitomize a little further some of the remaining most important advances, only to index them in your minds. To the reflexes have been added the virile, or bulbo-cavernous, the anal and oral, for diagnostic purposes.

To Bright's disease insanity has been added as a symptom, though this was known before. The psychopathology of the genic sense and its aberrations has been especially elucidated since the name of "Jack the Ripper," of Whitechapel notoriety, came before the public. The opium psychosis, likewise alcoholism and dipsomania have been much elucidated the past year. Additional cases of that curious phenomenon *seelinolindheit*, or soul blindness, have been recorded, and Monk has extended the visual area of the cerebral cortex. The relation of the blood to insanity has been more satisfactorily studied and a marked deficiency in hæmoglobin has been found among the insane. This recalls the once despised assertion of Rush, that insanity is a disease of the blood-vessels.

Buckhard has attempted the treatment of hallucinations by cutting into the ideogenic area of the brain, and in one case claims to have actually succeeded, but he will probably find few followers. Luys has elucidated the subject of chronic hallucinations, finding coarse morphological change in the paracentral lobule perceptible to the naked eye. Alcoholic neuritis as well as other forms of polyneuritis, already alluded to, has been markedly cleared up during the past year. The microbe of tetanus has been confirmed and Ferrier's cerebral localization, in the main, still stands the test of critical clinical and pathological experience.

In psychotherapy, the tranquilizing power of galvanic cephalic electrization, as a promoter of sleep, has been confirmed and admitted; codeia in the opium habit and as a substitute for opium in the management of the hyperæsthetic neuropathies, sulphonal, amyline hydrate, chloralamide, hypnol, hyoscine, phenacetine, exalgine, atipyrine, and a long list of new hypnotics, have come into practical use, while chemical synthesis signalizes one of the greatest triumphs in its history in the production of an artificial quinine absolutely identical with the product of the

amination of an idiot sixty years of age, who had been delivered with forceps, a depression of both parietal bones, corresponding to cerebral lesions, was found. Out of ten subsequent autopsies of idiots one similar condition was found to exist, and out of twenty-five living idiots six were found to have depression of the skull.)

cinchona tree, from a Brazilian shrub (*remijia pedunculata*), treated with iodine and chloride of mythyl (thanks to MM. Grimand and Armand), while experimental physiology has proven that tolerance of and resistance to the zymotic diseases, and marked immunity from them, in many instances, may be secured by protective inoculations; out of which, also, have grown Listerism and the safe, grand and painless surgery of our day—a surgery of half a century's growth, to which all the surgery of all the past in the world's history does not compare.

Congenital myotonia, as a disease of muscle, due to a persistence of or reversion to the embryonic type of muscular tissue, has been proven this year by Deliege. The pathology of athetosis has been shown by the younger Hammond, and Hachin demonstrates anew the neurotic theory of cholera. New proofs of the influence of the nervous system upon abnormal pigmentation are being constantly brought forward, and dermatology is paying large tribute to dermo-neurology in other directions, notably the eczemas.

These notes of progress show that medicine is not standing still, but keeping up with the procession; and what is being done in my special department, is going on all along the line. What an inspiring record of discovery have we now, and what a prophecy for the future! If it be the proudest possible boast of a man to-day to be a physician abreast of the present advance in medicine, what may it be in the generation that shall come after us? What would Hippocrates think could he now see what great results have flown from that early and faulty dissection of his friend Democritus? to which I have alluded, and what an amazing advance has been made since Vesalius, braving the superstition of his times, and even impending death, for his temerity, dared to make the first human dissection. Though the atrabilis for which Democritus sought was but a myth of the imagination, from attempts like that of Democritus grew Galen's proof that the arteries contained blood, not air, Harvey's and Jenner's great discoveries of the circulation and vaccinia, and Claude Bernard's demonstrations of vasomotor arteriole control, and Sir Charles Bell's discoveries in connection with the great sympathetic nerve.

The age that has so perfected the implements of war as to make peace profitable to all the world; that has given us the sewing machine, the telephone, the phonograph, the graphophone, the electric car for surface and aerial travel, sending man around the world in an incredibly short space of time, and sending audible messages, with lightning speed, of his journeyings back to his home, has given us resources in medicine and surgery equally astounding—discoveries and resources in biology and in physiological and chemico-therapy, so surprisingly grand and useful that skepticism is silent and criticism has become optimistic of nearly every professed novel resource of legitimate science. The favorable reception, for example, of Koch's recent incomplete discovery is in marked contrast with the early rejection, by the profession, of the discovery of Jenner, for on the discoverer of vaccinia was bestowed, in the earlier days, aversion and contumely almost equal to the threatened anathemas of the Church upon the devoted head of Galileo.

Science is now having its innings. The patient labor of her two or three past decades is bearing fruit in medical channels for the welfare of mankind far beyond the fondest hopes, or the most exaggerated expectations of the past. The miracles of modern medicine are simply marvelous beyond all past con-

ception of possibility. The wondrous, but unwise and unstable and morbid results of modern hypnotism, as commonly practised, are not at all comparable to the real and permanent and safe results of modern scientific therapy, medical and surgical, and the latter are in marked contrast with the fatal mischief of the modern mind-cure craze. Yet, in hypnotism and the faith-cures of the day, medical science discerns the influence of the psychical over the physical, and judiciously employs it. It understands and correctly interprets, though at variance with that of the ages that are gone, the significance of the royal or sacred touch—the miraculous power of priest, potentate or healing fountain. This interpretation is found in the demonstration of Saltpêtrière, La Charité, and the modern miracles of Nancy. Bernheim, Charcot, Paul Richet, Luys and Braid, who preceded them, have given the explanation.

The marvelous results of modern psychotherapy scarcely exceed the effects which follow judiciously applied electrotherapy, to say nothing of anæsthesia and modern resources of the later *materia medica* proper, in systemic and local disease. The power to control symptoms fills the mind of the modern physician with amazement, and his heart with thankfulness as he compares it with the comparatively meager resources of the past. Pain in disease is practically under his perfect control; insomnia, no matter how grave the morbid condition with which it may be allied, is no more, while the manifestations of febrile action may, whenever desired, be entirely subdued, the problem being only when to stop it. Modern therapy is to the modern physician in regard to aberrant function almost what the throttle valve is to the engineer of our day. Now pain and heat, sensibility and the heart's and the mind's morbid impulses are controlled and regulated at the will of the physician; the cerebral, gastric, intestinal, renal, and hepatic functions obey him if he be fully as skilled as he may be with all the resources of his art at full command, not with unerring certainty as yet, but with a degree of promptness and accuracy never before attained by our science and art. Truly, we live in an area of wondrous and most gratifying resources in medicine and the triumphs of the present and recent past give us buoyant hope of even greater victories over disease in the near future.

If I have appeared to dwell too much upon neurological progress, it is partly due to the fact that advance has been especially great in this department of medical research, partly to the fact that being the first neurologist who has ever been elected to preside over this body, it is probably expected that I should discuss medical progress from my especial standpoint; but my chief reason for doing so is, the great and greatly appreciated influence of the nervous system and neurotherapeutic agents in the causation, phenomena and treatment of disease, so great that neural pathology has now a place almost paramount in medical thought, so that the clear view of Cullen that all diseased manifestation is largely nervous, is being confirmed by discoveries of our day and the advances of the century since the great nosologist wrote, tend to confirm his now famous dictum: "*Quantum ego video motus morborum fere omnes motibus in systemate nervorum ita pendent, ut morbi fere omnes quodammodo Nervosi dici queant*," words I love to quote, though uttered over a century ago, because every year of medical observation since they were written has proved their truth.

But in every department of medical investigations we are in the midst of wondrous scientific surprises.

The orchitic fluid of the great French physiological *savant*; the remarkable inoculations of his colleague, Pasteur; the researches of the great Berlin bacteriologist, Koch, whatever we may think of his tuberculin, have only been transcended by the wondrous laparotomies of Lawson Tait, inaugurated by our own immortal Ephraim McDowell, the brilliant craniotomies of Victor Horsley, the abdominal sections of Nicholas Senn, the surgical antiseptic triumphs of Lister and their colleagues. The cranial topography mapped out by Ferrier and previously pointed to by Hitzig and Fritsch have opened up the old *terra incognita* of cerebral physiology and pathology to the advance of the neurotherapist and neurophysiologist, and we are infinitely blessed in the present age over our ancestors in the manifold resources of insight, and of relief afforded by our art in desperate extremes of despairing suffering.

(We seem to be coming under the reign of the "ines" in therapeutics, *e. g.*, tuberculine, spermine phenacetine, exalgine and the other coal tar products, besides cocaine, listerine, glycerine, maltine, and many more new laboratory products bearing this euphonious and familiar ending, and compounds too many to mention, like neureline, and appliances, like lintine, in the line of patent lint, have found place in our therapy, and the irrepressible *Angeline*, spelled with big letters, has taken her place and will not be put down, among the medicos of our era. Our crinoline *confrère* is mentally pregnant with great ideas and her wondrous intellectual progress is received into the best medical society. If we attempt to shut her out we may expect a *crisis* and climacteric of trouble. Though this involves a change of life in her she is to have no menopause. On the contrary, if she stays with us, as we hope she may, she will be always regular.)

SPECIALISTS AND SPECIALISM.

The recognition of special work in the vast field of practical medical therapeutics has passed beyond the control of the old foggy element who delight in decrying specialism, and while there is great danger of specialism becoming "priggish" and hobbyish, this danger can be averted by cordial recognition and fraternal relation of specialism with general medicine. The true specialist should be largely a consultant to the general profession and mainly indebted to it for his practice.

Specialists need only become markedly distinct in the public eye through the profession at large neglecting to give timely and proper recognition, and to amalgamate them with the mass in medicine that makes up the grand Salvation Army of the race, physically and mentally speaking. We are approaching a day, too, when the territory of the specialist in medicine will become common ground. The early coming auspicious day should be hailed by all true physicians. Specialism is simply the advance picket guard which explores the ground ahead, and ascertains if it be proper ground for occupancy by the grand army of medicine, and sooner or later, the whole will take up its line of march and go forward to possess it.

MORAL AND SOCIAL RELATIONS.

Physicians, as a class, are honest men. Professional pride is founded largely in candid dealings with patients. The welfare of the patient is the first law with us, and no body of men has ever had so plain a moral plank in its platform of principles as ours. The precept of the golden rule has gleamed through the conduct of the profession in all ages. It was in-

troduced practically in the Hippocratic oath, and to-day no body of men stand before the world in a more disinterested or more honest light than does the medical profession. We hold the profoundest secrets of the family with the sanctity of the confessional, and few of us are ever charged with filching from our patients for considerations of benefit without reasonable hope of benefiting them.

We are often charged with incompetency, but seldom with dishonesty—never justly the latter, for medicine, whatever her faults of head, has none of heart towards mankind. She is the peer of all professions, the ministry of the Gospel of the immaculate Immanuel not excepted.

The incompetency of regular medicine is the incompetency of human imperfection only—the incompetency of the times in which we live, not the lack of endeavor. Notwithstanding we live in an age that has given us the electric light, we still see some things as through a glass darkly, but it is safe to say that our profession partakes as much of the general illumination of the present age as any other of the practical arts and sciences. We have utilized the electric light in exploring the obscurest recesses of the body and the lightning in treating its diseases. We are chasing the bacilli to their lairs and seeking to solve their pathological or physiological and hygienic significance.

THE UNRECOGNIZED HELPING HAND.

Medicine benefits mankind in a thousand ways not appreciated without the profession, even as "the light shineth in the darkness, though the darkness comprehendeth it not."

The pestilence that once walked in darkness and the destruction that once wasted at noonday, now destroy no more, because the hand of a Jenner, a Pasteur, or a Koch has said to destroying disease, as was said by a Mightier one of old to the engulfing sea, "thus far and no farther." The destructive force of devastating nature becomes impotent of harm, and the fears of threatened and trembling humanity are allayed. Few of the thousands of human beings rescued from former peril of small-pox ever think of the inestimable service rendered them by Jenner and vaccinia, as the thousands yet to be saved from terrible death, "in consumption's ghastly form," or in cholera's fatal collapse, will in the years to come give not much thought to the mysterious salvation of Liebrecht and his cantharadizin; or the inestimable researches of Koch; nor will it think of the millions of deaths saved through other bacteriological researches and the numberless hygienic, health-saving, death-resisting discoveries freely given to the world by the medical profession of the nineteenth century. How little does the world at large think, in its wild chasing after folly as it flies, after wealth and fame, honor and glory, which so elude the pursuer and throw him into the hands of the physician, of the restless and myriad-peopled world about it, which has been conquered to health since the memorable, original bacteriological discovery of Leuenbroeck, about two centuries ago, so that man now lives where he formerly died, through applied science and the labors of the medical profession. And while the conflict goes on, the physician stands sentinel for mankind, fighting his battles for him against the destroyer of his peace and the things that threaten his health and life. Yet how little does the rescued world now think of its obligations to the medical profession for its escape from the fatal dangers of malaria, and the horrible ravages of small-

pox, cholera, etc. The world has almost forgotten how deadly the Pontine marshes were in the time of the Cæsars, and how comparatively safe they are now through the advances of hygienic, prophylactic, and therapeutic science.

The medical profession is humanity's earthly human providence. It watches over man, unappreciated and unthanked, often, in his hours of wakefulness and while he sleeps, from his cradle to his grave, and wards off threatened dangers unseen by others, and as in regard to that high and supreme Providence who rules over all, man often gives the doctor and his vigilant work for his welfare a thought only in his last hours when he is too feeble to think of anything else and, alas, sometimes when it is too late for his physical, as it may be for his spiritual salvation. Glorious profession! practiced in the life of Christ and his loving disciple, Luke, the good physician.

NON-POLITICAL INTERFERENCE WITH PUBLIC MEDICAL CHARITIES.

The medical profession champions the cause of the weak and the afflicted. It is fitting, therefore, that I should close this address with a word for the world's helpless wards who cannot speak for themselves.

To the victors may belong the spoils of political conflict, but where the spoils are human victims, minds dethroned and sacrificed to medical incompetency and party policy, we who are the professional descendants of those who brought these unfortunates out of the cruel bondage, and neglect of a past inhumanity and superstition towards them, should secure for them the proper medical, as well as custodial care, which their disease demands in lieu of their broken chains and filthy, neglected dungeons.

Many of them, even in our almshouse and country asylums, have fallen from high mental estates, even higher places than those held by some who hold in the hollow of their hands their destinies, and their pitiable helplessness mutely pleads with our consciences to extend them sympathy and aid. We should endeavor to so influence public opinion and to so use our ballots, that parties and politicians so politic and inhuman as to sacrifice the mentally and physically maimed, or ill, in public hospitals and other of our eleemosynary institutions whom it is our special duty, under Providence, to guard, shall know the profession's indignation and feel its power.

The ordinary physician requires several years of training in these institutions, added to his general professional knowledge and experience, to fit him for the proper understanding and care of the insane. To turn him out at this time, as is often done and put in a novice, is not only a wrong to him who has given up his private business, expecting a permanent municipal position, but it is a crime against humanity against which science, experience and every instinct of human charity protests.

It would not damage the interests of parties to apply rules of Civil Service reform and fly the non-combatant flag over our State and city hospitals, especially for the insane, remembering that the mentally maimed who have fallen in life's conflict, are entitled to something more than to be tenderly carried from a field on a stretcher to a place of shelter. They should have their wounds skillfully treated, and they should be restored, if possible, again to duty. This, a sense of duty and every consideration of sound public policy, prompts us to so do and to demand.

THE DOCTOR IN POLITICS.

One other subject, briefly, and I close. The doctor has too long held aloof from affairs of State. Re-

sult—our greatest names in medical history ignored if not forgotten; our highest interests and those of the people neglected and unappreciated. Benjamin Rush, great in his day and greater now, signer of the Declaration, Surgeon-General of the American army during its struggle for the life it gave the nation, author of immortal fame in medicine and a practitioner of skill and wonderful expediency in the grave emergency of a British embargo, which saved the Continental Volunteers much suffering, has yet no monument to his memory. McDowell and Sims, too, and Jackson, who, if ever military hero or civil statesman deserved to be so remembered by a grateful people, should long since have been commemorated in bronze or marble at the nation's capitol. They would have been if our best medical men, imitating the great Virchow and others abroad, had taken part in the legislation of this country. The medical staff of the army and navy, too, would have had the higher rank which they deserve.

A PHYSICIAN IN THE CABINET.

Had we thus looked to our interests the President's Cabinet would long since have been represented by one member of the profession, as the law, agriculture, finance, etc., are. We should have had the Medical Minister of Public Health, for which the American Medical Association is just now pleading, much to the profit of the people in the saving of the public health and of innumerable lives and to the honor of the profession, which, above all other callings, has been the friend and benefactor of mankind, giving to humanity one of its greatest blessings and to the world many of its greatest and best men, whatever the world may say to the contrary—men who, like Hippocrates, destroyed the most fatal of the world's delusions, and proved that law and not the caprice of the gods governed nature's rule over the morbid process, or like Vesalius, who dared and did for mankind more than ever warrior or valiant on the field of battle—nature's uncrowned noblemen, who may yet live in the hearts of some unlaureled, even as the memory of Harvey and Jenner and Jackson and McDowell and hosts of others here unnamed, are not yet fully appreciated by the world at large. But their deeds will shine brighter and brighter as the world comes to know them and fully realize, as we do, their incomparable benefactors, their unsurpassed greatness and their unequalled heroism.

THE MEDICAL TREATMENT OF CYSTITIS.¹

By JAMES TYSON, M.D.

THE medical treatment of cystitis does not furnish a very satisfactory chapter in therapeutics. It includes such treatment as the physician is called upon to use, supposing the exciting cause, such as a stone or obstruction in the urethra, to have been removed, wherever possible. I say when possible, because the enlarged prostate, which is responsible for so many cases of cystitis, is, in the vast majority of cases, not removable even in these days of brilliant surgical results. It must also include the treatment of a certain number of cases in which no removable cause is ascertainable, as well as cases where, as with a long previous gonorrhœa, the cause has long since been removed, but has left a deep-rooted tendency, scarcely eradicable.

It should be stated, too, at the outset, that the vast majority of cases of so-called cystitis are inflammations of the neck of the bladder and of that part of the urethra passing through the prostate.

Acute cystitis is far less commonly met by the physician than the chronic form, while its treatment is far simpler, and, I may add, more satisfactory, at least so far as the removal of the acute symptoms is concerned. Rest in bed is a primary and essential condition. Leeches to the perineum should be applied more frequently than they are. A poultice to this same region and over the abdominal region is always useful, while a brisk saline cathartic should never be omitted.

As the feverish state which always accompanies cystitis is more or less constantly associated with a scanty urine, concentrated and irritating to the inflamed mucous membrane, it is desirable at once to increase the secretion, and thus dilute it. Copious libations of pure water, to which the citrate or acetate of potassium is added, in 15 to 20-grain doses for an adult, should be allowed. The ordinary spirits of nitric ether, in 2-drachm doses, every two hours, is an admirable adjuvant, and may be combined with the officinal liquor potassii citratis, which contains about 20 grains of citrate of potassium to the half ounce. Formerly the mucilage of flaxseed or flaxseed tea was much used as a diluent menstruum for the diuretic alkalies indicated, but I am doubtful whether it is any more efficient than a like quantity of water.

Where there is much pain and straining, as is often the case, especially where cantharides is the cause of the inflammation, opium is indispensable, always in the shape of a suppository, half a grain to a grain of the extract being thus administered, or a proportionate amount of morphine. Iced water injections into the rectum, or pieces of ice similarly applied, are very efficient in allaying the pain and irritation where additional measures are needed.

The successful treatment of *chronic cystitis* is a much more difficult task, for three evident reasons:

1. The constant presence in the bladder of the urine with its irritating qualities, especially to an inflamed mucous membrane;
2. The difficulty in getting remedies to reach the inflamed surface; and,
3. The pent-up, inflammatory products, which in their decomposition often make the urine still more irritating by exciting in it ammoniacal changes.

There is no doubt that, if the urine could be kept from entering the bladder during the existence of an inflammation, the latter would rapidly heal; that cure would be facilitated by obtaining ready escape for the pus and mucus formed in the inflammatory process; while happier results might also be reasonably expected if we could secure readier access for remedies to the inflamed areas. None of these indications can be met entirely; hence the difficulty in attaining a cure. They remain, however, the conditions to be fulfilled; and while none can be thoroughly secured, they may be approximated in various degrees. To do this should be the object of treatment.

First, the irritating qualities of the urine may be diminished by the use of diluents, as already recommended in the treatment of acute cystitis. Almost any of the negative mineral waters, so highly recommended by their owners, are useful for this purpose. Just as good is pure spring water, or even Schuylkill water, and better is distilled water. From 1 to 2 quarts should be taken daily. If the kidneys are equal to their office, a large quantity of light-hued

¹ Read at the Philadelphia County Medical Society, November 11, 1891. For discussion, see page 482.

urine, of low specific gravity and relatively weak in solids, will be secreted.

When it is proposed to go further and add to the efficiency of diluents, mistakes are often made. While one can scarcely go astray in adding alkalies to the fluid ingested in acute cystitis, it is very different with the chronic form. In this the urine is often alkaline, or ready to become so on the slightest addition of alkali to the blood. Such alkalinity of urine in turn favors decomposition, the effect of which is to convert the pus, if present, into a tenacious, glairy fluid, which the bladder cannot evacuate. Notwithstanding this tendency, I have known liquor potassæ and other alkalies to be administered under precisely these conditions—adding fuel to the flame. The indication, under these circumstances, is to render the urine acid, if possible, although this is very difficult to accomplish. Benzoic acid has the reputation of doing this, and it probably is true of it when administered in very large doses. It may be given in the shape of a 5-grain compressed pill, of which at least six must be given in a day to produce any effect. The same property has been assigned to citric acid, but this is a mistake, as all of the vegetable acids, when ingested, are eliminated as alkaline carbonates.

The second indication is to medicate the inflamed surface. Two ways, of course, suggest themselves:

(a) By the internal administration of drugs.

(b) By the injection of medicated liquids into the bladder.

To carry out the first method, an enormous number of infusions, decoctions and fluid extracts of vegetable substances have been suggested, the vast majority of which are absolutely useless, except as they serve by their quantity to act as diluents. Among the best known of these are buchu, pareira brava, uva ursi, and triticum repens. I have never known any beneficial results from any of them, and have long ago ceased to prescribe them.

The only class of remedies I have found of service in cystitis through their internal administration are the balsams. Of these, the balsam copaiba is practically unavailable, because not one stomach in a hundred will submit to its ingestion in sufficient doses or for long enough time to permit it to be of any use. On the other hand, I have found sandalwood oil very useful, and it is about the only remedy of which I can say this for its direct effect upon the mucous membrane of the bladder. It is also comparatively well borne by the stomach, and is best administered in capsules containing 10 minims. I believe it has heretofore been the usual custom to give these and like remedies after meals, but I have recently adopted the method of giving them on an empty stomach before meals. I believe they are as well, and even better, borne than when given after food, and they pass into the blood much more quickly. It is desirable to impregnate the blood and impart to the urine a balsam odor. This is scarcely possible with less than 8 capsules a day—2 before each meal and 2 at bedtime. I think I may say that I have found the so-called Santal-Midy capsules—which are, I believe, nothing but a very pure sandalwood oil—better borne than the other specimens of the oil. I have given as many as 12 of these a day for considerable periods of time without deranging the stomach.

Both boric acid and benzoic acid are useful adjuvants to the treatment of chronic cystitis through their antiseptic effect on the urine, each in 5-grain doses rapidly increased to 10. I have used resorcin in 5 to 10-grain doses, and naphthaline in 2-grain doses for the same purpose.

The application of remedies to the bladder by injections can be conveniently considered in connection with the third indication—the getting rid of the products of inflammation, the pus and mucus, and the compounds resulting from their decomposition. The latter are, of course, not always present, but all who have had much experience with cystitis are familiar with the tenacious, glairy, mucoid matter, which will not drop or rise up in a pipette, glistening with large crystals of triple phosphate, and exhaling a stinking ammoniacal odor which quickly contaminates an entire apartment. There is only one way to get rid of this, and that is to wash out the bladder, and too often this is too long deferred. Tepid water should be first used, and the injection made through the soft catheter now so invariably adopted. Sir Henry Thompson is very emphatic in his directions that no more than two ounces should be thrown in at a time, and that this should be allowed to run out, a like quantity again injected and allowed to run out, and this repeated until the water comes out as clear as it enters. In a very large experience in washing out bladders, I have never met an instance in which the amount named by Sir Henry may not be doubled with advantage, so that I begin with four ounces. When this quantity is used, a much shorter time is necessary to cleanse the bladder thoroughly; and after the capacity of the bladder has been determined I often throw in more, because it is sometimes useful to distend the viscus a little, for in this manner the depressions and inequalities between the muscular trabeculæ, always present in advanced bladder inflammations, are thoroughly reached. These simple injections, practised once a day, or in severe cases twice a day, often result most happily. I have seen the pus reduced from large bulk to a mere trace, and micturition reduced from five or six times to once a night. Commonly, after a few injections with plain water, I add some medication.

My favorite is the salicylate of sodium in the proportion of a drachm to the pint. Its disinfecting qualities are undoubted, and I have some reason to believe that the soothing effect claimed for it is not without foundation. I have used a good deal of Sir Henry Thompson's soothing solution—of bichloride of sodium, 1 ounce; glycerine, 2 ounces; water, 2 ounces; and of this mixture, half an ounce to 4 ounces of tepid water—with about the same result. Boric acid, in the proportion of a drachm to the pint, is also very satisfactory.

Alum is an astringent which has been too much overlooked of late in suppurating processes in mucous membranes, and may be substituted for the salicylate with advantage where the pus does not diminish as rapidly as is desired. It should be more cautiously used than the salicylate of sodium. Sufficient of the powdered alum should be first added to a pint to give it a distinctly astringent taste, when the bladder should be washed out as described, while a small quantity may be allowed to remain after the last injection.

Where there is a foul odor present I use the bichloride of mercury in solution, but exceedingly dilute. It is almost incredible how small a proportion of this salt is irritating to the bladder, and having learned by experience, I never begin with a solution stronger than 1-25,000, but gradually increase the strength if it is well borne. Carbolic acid may be substituted for the bichloride of mercury, but it has not been so satisfactory in my hands.

Other drugs are recommended to be similarly used, but I have had little or no experience with them.

One from which much may, with reason, be expected is the peroxide of hydrogen, one part to five of water. In the single instance in which I have used this, the patient, who had previously been using the bichloride solution, returned of his own accord to the latter, because he thought it more satisfactory. Among other remedies recommended to be used the same way are acetate of lead, 1 grain to 4 ounces; dilute nitric acid, 1 or 2 minims to the ounce; and nitrate of silver, 1 grain to 4 ounces; but I have had no experience with them.

Anodynes are indispensable in many cases of cystitis to relieve the patient of extreme pain and the frequent desire to pass water, which are the result of the same cause. Opium and its alkaloids are the most efficient, and they are best introduced by the rectum. There appears to be no absorbing power for opium at least, and there is no use in attempting to use any iodines by that channel.

Cocaine, from which so much might reasonably be expected, has failed of its purpose in my hands. I have injected as much as two ounces of a 2 per cent. solution into the bladder without effect, except to produce some of the symptoms of cocaine poisoning. Most disappointing, too, has been the use of cocaine to remove the exquisite tenderness of the urethra which sometimes attends this condition, and is a serious drawback to the use of the catheter.

Where there is greatly enlarged prostate, catheterization is indispensable, and is attended often with the most happy results. It is often too long deferred because of the natural repugnance to the use of the instrument. Of course, the patient or his friends should be taught to use the catheter and to wash out the bladder. In these days of refined antisepticism it is scarcely necessary to say that the extremest precautions should be taken to cleanse the catheter after its use, in order to avoid sepsis. There is nothing better for this purpose than the bichloride solutions 1-1,000, in which the catheter should be allowed to lie for a short time after being cleansed with boiling hot water.

How much can be accomplished by such treatment as the above-described? That an absolute and total cure is ever obtained in chronic cystitis is exceedingly doubtful. Hence the statement at the beginning of my paper, that the medical treatment of cystitis does not furnish a very satisfactory chapter in therapeutics. On the other hand, that a life of suffering may be converted into one of comparative comfort is certainly true, and I have many times seen it. Nay, more; I have more than once seen a life prolonged half a dozen years in such comfort by careful attention to the bladder of the kind described.

It occasionally happens, of course, that all treatment of this kind fails, and yet the patient lives to be tortured by the discomfort of the situation. Three times I have had perineal section done by the surgeons for the relief of such cases, in each case with some relief, although with less than was hoped for.

THE URETHRA, BLADDER, AND URETERS DURING PREGNANCY, LABOR, AND THE PUERPERIUM.¹

By W. H. PARISH, M.D.,

Professor of Obstetrics, Dartmouth Medical College; Professor of Anatomy, Woman's Medical College of Pennsylvania, etc.

THE condition of increased vascularity and irritability of the urethra, bladder, and ureters during pregnancy is due in part to the pressure of the

uterus, and in part to the alterations in the general pelvic circulatory and nervous conditions awakened by the stimulus incident to gestation.

The bladder in early pregnancy is less capable of distention in the antero-posterior direction, and its enlargement is chiefly lateral. Later in pregnancy the enlarging uterus draws the bladder upward above the pelvic brim. The changes in the position of the bladder during pregnancy doubtless determine to some extent, more frequent, and at times annoying micturition, yet the elevation of the bladder above the brim is a conservative provision, for in this way the bladder is largely protected from harmful pressure during normal labor.

However, the utero-vesical ligaments are so unyielding that the bladder participates in such abnormal displacements of the uterus as occur during the pregnant state; as, for instance, it follows the uterus in procidentia, and is drawn downward and backward in retroversion of the gravid womb. The urethra becomes elongated with the elevation of the uterus, and in early pregnancy, if uterine prolapse occurs, and also in advanced pregnancy, if the uterus drops into the true pelvis, the upper portion of the urethra curves backward and downward, constituting dislocation of the upper third of the urethra, with the symptoms pertaining thereto.

With the changes in the position of the bladder, the lower portions of the ureters necessarily change in position; but these tubes suffer chiefly from pressure of the pregnant uterus, and, as a consequence, they, above the point of pressure, often become dilated to the size of the finger or of the thumb. The blocking up of the urine in the ureters influences the renal condition unfavorably, and doubtless, at times, contributes in the production of urinæmia and eclampsia. The pressure exerted upon the uterus suggests the advisability of repeated recumbency, or, better still, of the knee-chest position, during advanced pregnancy. When peri-uterine adhesions, with uterine displacement, exist, there is still greater risk of injurious compression of the ureters, and of eclampsia.

Mild cystic catarrh, some say inflammation, is of somewhat frequent occurrence during pregnancy, and may be the cause of albuminuria when the amount of albumin in the urine is small.

Hematuria occasionally occurs, because of the impeded pelvic circulation. A varicose condition of the bladder and urethral veins, usually with a like condition of the anterior vaginal wall and of the vulva may arise, and be the cause of hematuria, with frequent urination and pelvic distress. This morbid vascular condition calls for rest during pregnancy. After labor it usually disappears, but when subinvolution occurs, it may become persistent.

When cystitis, even of mild type, exists during pregnancy, its careful treatment is strongly indicated, for labor and the lying-in are very prone to aggravate the inflammation. Especially is this true if the cystitis is of gonorrhœal origin. It has been observed also, that when cystitis exists during pregnancy, subinvolution of the uterus is very apt to occur, and the inflammation is very liable to become chronic.

In retroversion and incarceration of the gravid uterus, the lesions produced in the urinary apparatus constitute the most serious morbid changes incident to this grave complication of early pregnancy. Ischuria is the earliest, and one of the most important symptoms. The early compression of the urethra by the uterine cervix produces œdematous swelling of the urethral wall, with at first partial obstruction to the exit of urine. The pressure instituted by the

¹ Read before the Philadelphia County Medical Society November 11, 1891. For discussion see page 483.

enlarging uterus increases until urinary retention occurs, accompanied, it may be, with dribbling of urine from the over-distended bladder. The retained urine rapidly undergoes ammoniacal decomposition, and cystitis becomes an early complication. The inflammatory action produces diphtheritic flakes over the mucous membrane of the bladder, with erosion and ulceration. Absorption of the decomposed urine occurs with constitutional symptoms.

The mucosa may be cast off from the entire bladder, but especially from the portions of the organ above the neck, showing that this separation of the mucous membrane is due to the degree of congestion and of inflammation, rather than to direct pressure—for the pressure is greatest at the neck. I have seen large portions of the mucosa cast off and blocking the urethra. It is stated that the separation of the mucous membrane is not likely to occur before the sixth day of the incarceration.

In some instances portions of the musciosa have been thus separated, and gangrene of the entire thickness of the bladder-wall has occurred. Owing to the retention, the ureters become greatly and the renal pelvis moderately dilated. The inflammation extends along the ureters and invades the kidneys. The suppression of retention also occurs with constitutional manifestation.

In the over-distention the bladder-wall, though thinned at points, becomes remarkably thickened throughout most of its extent, and in a few days, even when entirely empty, will present to the palpating hand a firm mass, wonderfully like the non-pregnant uterus, and may mislead the examiner into supposing that the uterus is empty, and that a retro-uterine tumor exists.

In some instances the distended bladder has reached even to the ensiform cartilage. Rupture of the bladder has occurred, especially in the attempt at replacement. As an essential preliminary to replacement, the bladder must be emptied either with the catheter or by aspiration. When the over-distended bladder is being emptied, a bandage should be drawn firmly around the abdomen to lessen shock, to prevent the entrance of germs with atmospheric air, and to prevent hemorrhage from the cystic vessels.

Paralysis of the bladder accompanies the over-distention, and catheterization will be necessitated at intervals of six hours after replacement, otherwise distention will again occur, with danger of a reproduction of the uterine displacement. Irrigation of the bladder will be indicated for several days, for the cystitis and ascending ureteritis endanger life after the uterine displacement has been corrected.

In the original production of retroversion of the gravid uterus, an over-distended bladder probably has very little influence, except in instances in which retroversion preceded pregnancy, and in other instances in which superior adhesions prevented the distending bladder enlarging upward.

When we study the relations of the bladder to labor, we find that in an entirely normal delivery, the bladder does not usually impede labor, and labor does not interfere with the integrity, or injuriously with the functions of the bladder. For, in addition to the elevated position of the bladder at the end of pregnancy, the frequent micturition of labor is conservative, for thus the bladder is kept so nearly empty that its presence is in no manner harmful.

Should, however, cedematous swelling of the urethra, or the immediate effects of pressure, or perverted nerve-action lead to distention of the bladder, parturient expulsive efforts are rendered feeble and

less efficient, and the presentation or position may be modified unfavorably.

In neglected cases, an over-distended bladder becomes a grave complication, partly in the same manner that it does in incarceration of the pregnant uterus. A distended bladder may contribute also to the formation of a fistula, or to rupture during expulsive or extractive efforts. In rupture, the tear usually occurs in the posterior wall and into the peritoneal cavity, though it may occur anteriorly, and, in the latter case, if low down may give rise to infiltration of the anterior abdominal wall. Collapse accompanies rupture of the bladder, and if urine escapes into the peritoneal cavity, a fatal result is very probable. Under such circumstances cœliotomy would be urgently demanded, with trimming and suturing of the lips of the rent, and careful toilet of the peritoneum.

Rupture of an over-distended bladder has occurred during expulsive efforts in an abortion at the third month of gestation, even when there was no incarceration of the uterus.

Cases of cystocolpocele, or prolapse of the bladder, usually with distention, have occurred during labor, impeding delivery and leading to the erroneous diagnosis of the bag of waters, or of a fluid pelvic tumor. Under such erroneous diagnosis the bladder has been incised or punctured *per vaginam*. A knowledge of the possibility of such a complication should lead to an easy diagnosis with the catheter carried into the bladder.

The downward dislocation of the upper portion of the urethra which sometimes occurs as the uterus enters the pelvis near the end of pregnancy may be further aggravated as the head descends, or when, with the forceps, a large head is pulled through the pelvic canal before moulding has occurred. This condition of the urethra is often associated with partial prolapse of the bladder, but both conditions usually disappear after labor if proper involution occurs, but may be persistent in subinvolution, and especially when ununited laceration of the perineum exists.

Undue distention of the bladder rarely occurs during labor, except in the second stage, and is then usually dependent upon pressure of the presenting part upon the urethra and the neck of the bladder. When an anæsthetic is administered during either the first or the second stage of labor, retention may arise, and be due to the obtunding influence of the anæsthetic. It should also be remembered that the secretion of urine is increased during labor, and the bladder may become filled rapidly. Sometimes, when spontaneous urination seems impossible in the recumbent posture, an attempt to urinate while sitting and between the pains will relieve the retention and obviate the necessity of catheterization, unless the head is fixed in the pelvis. When catheterization is necessitated during labor the simple precaution of pushing up through the vagina, in the absence of pain, the presenting part is too often overlooked, with the result of always endangering the integrity of the urethral and bladder mucous membranes, and sometimes of failing to introduce the catheter.

In neglected cases it is occasionally necessary to resort to supra-pubic aspiration of the bladder during labor, but before this is done one should call to his aid the relaxing influence of anæsthesia, and the favoring latero-abdominal and genu-pectoral positions.

Prolonged pressure, especially of the fetal head, or occasionally of any part of the foetus, endangers

the integrity of the cystic, urethral, and uterine walls.

Ninety per cent. of urinary fistulæ are dependent upon injuries sustained during labor, and in most instances are produced by the prolonged pressure of some part of the fœtus. An evidence of the truth of the latter statement is the generally recognized fact that since the more prompt resort to the obstetric forceps has become the rule of practice, urinary fistulæ occur with greatly reduced frequency. The old practice of administering ergot during labor contributed, doubtless, in the production of fistulæ, through its influence in bringing about continuous uterine contractions.

It is long sustained pressure that determines the sloughing from which the fistula generally arises. Although the general use of the forceps has promoted in many instances the formation of fistulæ, yet I am confident that the injudicious use of the instrument has been at times productive of such lesions.

The resort to the forceps when the head is movable above the brim, especially with a flat pelvis considerably narrowed places in great danger the walls of the urethra, bladder, and ureters. Also the too frequent mal-direction of the force exerted in traction with the forceps, as when this force is directed against the anterior pelvic wall, produces contusions and sloughing of the soft parts, including, at times, the walls of some part of the urinary apparatus. The contusion may be sufficient to produce a fistula, or it may less seriously yet injuriously affect the urinary structures.

Were the axis-traction forceps in universal use, as in my opinion they should be, the mal-directed and too great force so often resorted to in traction would be avoided, and consequently the pressure exerted be less prolonged and less forcible. At times a fistula may result from excessive pressure exerted even for a short time, especially if the bladder is partially or greatly distended.

Prolonged or undue pressure during labor may also give rise to erosion or ulceration and inflammation of either urethra, bladder or ureter.

These structures are liable to serious injury during the performance of craniotomy, from being punctured with either spiculæ of bone or with the perforator.

The performance of version and of extraction by the feet has resulted in rupture of a distended bladder, and in other instances in sloughing productive of fistulæ, or of vaginal cicatrices which interfere with the functions of the bladder.

Vesico-intestinal fistulæ have sometimes followed labor in cases of old adhesions between the bladder and some part of the intestinal tract.

In the performance of the classical Cæsarean or of the Porro operation, the bladder and ureters should always escape injury, unless there exists a patulous condition of the urachus.

In a large proportion of the cases of cœlio-elytrotomy the bladder was opened into, and the danger of this accident occurring was one of the several good reasons why that operation quickly fell into disfavor.

Occasionally a calculus exists in the bladder during labor, and its presence at that time always brings considerable danger to the patient. It is advised by some to endeavor to push the calculus upward above the brim; but it seems to me that this procedure would often be impossible of performance, and would be always of uncertain benefit. Extraction through the urethra after dilatation, preceded, it may be, by lithotrity, would promise the best result. Or, if this were impracticable, from the low and fixed position

of the head, vaginal, or, possibly, supra-pubic lithotomy, would be indicated. If the stone could not be carried above the brim, the supra-pubic operation would not be possible. I can scarcely understand how the circumstances can be such as to justify the performance of craniotomy, the child being alive and viable.

During the puerperal period perforation of the ureter, bladder, or urethra may arise from ulceration or from sloughing due to injuries sustained during labor. In fact, most fistulæ do not appear until several days have elapsed. In some instances, by judicious treatment, especially with vaginal antiseptic douches, such perforations may be avoided. This is effected by lessening the intensity of the ulcerative and inflammatory processes. The liability to cystocele may be lessened by proper observance of recumbency and by immediate perineorrhaphy, if indicated. The measures influential in securing due uterine involution may be said to be generally favorable to the establishment of a normal condition of the urinary apparatus.

The inability to empty the bladder, so frequently existing during the few days following labor, may be due to one or several causes. At times swelling of the urethral wall may be the principal cause, though I do not think that this is frequently the sole cause. Often the loss of support sustained by the bladder due to the emptying of the uterus, occasions the retention, while in other instances recumbency is chiefly at fault, for not a few women are unable to urinate at any time while recumbent.

It is best that the bladder should be evacuated every eight hours after labor.

If the labor has been a normal one, it is safer for the patient to be placed on the commode without being on her feet than to use the catheter. Nearly always the sitting posture will enable her to urinate. The use of the catheter after labor brings peculiar risks. Septic urethritis, cystitis, ureteritis, and nephritis, one or all, have certainly been thus produced, and not infrequently. The catheter often causes abrasion, and although absorption through the urinary mucous membrane, in its normal condition, must be exceedingly slow, yet when this membrane is congested—but especially when abraded—absorption readily occurs. Practically, the physician is never certain that the catheter is aseptic unless he cleanses it himself; and even then he must have correct knowledge as to how the instrument can be cleansed. Many nurses are either careless or ignorant, and the catheter is not easily kept aseptic. Moreover, the catheter may be perfectly clean, and yet it may pick up from the external genitals after labor septic material, or material that will quickly become septic, and carry it into the bladder. The custom, still recommended in some text-books, of passing the catheter under the bed-covering, is exceedingly erroneous. If the catheter must be used, the genitals and urethral meatus should be exposed and rendered entirely clean, and the clean catheter should be introduced with the parts in view—for only in this way can one guard against the introduction into the bladder of foul material. Hence, unless the contra-indications are plain, the patient should be placed on the commode, or in the sitting posture on a vessel in bed, or in the knee-elbow position, if she cannot urinate in a urinal or a bed-pan. After primary perineorrhaphy, the patient should be permitted to urinate spontaneously while lying on the bed-pan, and immediate douching of the external

parts will prevent decomposing urine from interfering with primary union.

A catheter should be perfectly smooth, and with small orifices near the distal extremity. Some writers prefer the gum catheter. The best is of glass; and each patient should have a new one. The glass catheter can be more easily and more certainly rendered aseptic than the gum. Cystitis after labor determines subinvolution—may lead to urethritis, and possibly to pyelitis, which may rapidly terminate fatally, or become chronic, with eventual loss of life. An active inflammation of the bladder, especially after labor, may be productive of pericystitis or pelvic peritonitis and of pelvic cellulitis. Chronic cystitis in the female often dates back to the lying-in. Stricture in the course of the urethra, or at the meatus, also finds its origin in a post-partum urethritis, or in external ulceration.

THE RATIONALE AND TECHNIQUE OF SUPRA-PUBIC CYSTOTOMY.¹

By JOSEPH HOFFMAN, M.D.

THE history of this now classical operation for all the affections of the bladder where surgical interference is justifiable is a travesty upon the acumen of the surgeon. I speak widely, and, it may seem to some, unwisely, but it appears to me such expression is only moderate when all facts in reference to the subject are considered. The lateral operation for stone, as is well known, became popular because of its success upon children. Hence the reasoning by which it was indiscriminately applied to all cases in the adult seems only ridiculous when the same methods of arguing the so-called high operation out of sight are scanned. The high operation was dangerous because of wounding the peritoneum, and this was gravely held to, after it was well known that the operation had been performed at an early day with success, and that the anatomy of the parts is such that the peritoneum is easily escaped. Up to within a decade the same logic is followed, and the supra-pubic operation is gravely dismissed with the feeble criticism that the statistics of the operation are not good, though such condemnation is followed generally with the explanation that this is perhaps due to the fact that the operation has been reserved for cases in which other operations could not be done, and accordingly the patients were in an unfavorable condition. It is not the intention of this paper to go into the history of the operation, only as to show that the reasoning against it, both present and past, is in the highest degree unworthy of acceptance, and in fact does not amount to reasoning at all. It is intended rather to call attention to the fact that, in the opinion of the advanced surgical exponents of to day, it is the operation, beside which all others, in the treatment of vesical disease, must play an unimportant part. Here in Philadelphia we have had much urgent opposition to the acceptance of this fact, but also, it is pleasant to know, that here also there has been much and well argued stand taken for the operation. In this connection, Dr. Dulles must have unstinted credit.

It is too much the fashion in surgery, as in physic, to follow out an ancient idea as if it were inspired. The mummies of science are no more worthy of adoration than error in any other form. So-called scientific data, which are not and never were scientific, are at

the bottom of much mischief and many disasters in practical surgery, as well as in physic. The arguments by which the supra-pubic cystotomy can be urged for general acceptance in all cases in which it is proposed to enter the bladder, are all based upon anatomical fact and practical results in good hands. Those who are having the most experience with it are giving it the highest praise. Looking at the now generally accepted axioms of this latter-day surgery, it is difficult to understand how this can be otherwise. In the perineal point of attack by which the bladder is to be entered there are many structures of vital importance and whose anatomical distribution are far from uniform. On the other hand, in the supra-pubic operation, there are no important structures to be met; there are no blood-vessels that cannot be easily controlled in the sight of the operator; there are no anomalies to be expected, and, if they do occur, need have no terror for the operator. The operation then being always under the complete control of the operator, is clearly the one to be preferred from a merely theoretical standpoint. But theory does not always hold good in practice, so let us see whether here we are also misled. The danger most to be dreaded from the perineal operations are hemorrhage and contusion of the parts by the passage of a large stone, especially injury to the seminal vesicles. In the procedure under consideration we have seen there is no danger from hemorrhage, and the contusion cannot interfere with vital structures, because they are not met; the bladder is not wounded where its integrity is interfered with, and even if a stone larger than is expected is to be dealt with, there is no difficulty in removing it far more successfully and certainly and simply than by any other method. I do not except the now generally accepted method of crushing. The reasoning by which this conclusion is reached I think so clear that I will not follow it out. How many of the older operators in this society—in this room—have in mind harrowing attempts to get control of calculi imbedded in the bladder; of hands introduced into the rectum, in order to bring the stone into the grasp of the forceps; of lacerated bladder, perineum, urethra; and all of which it is the hope of the operator to escape! It will be evident to the veriest tyro in anatomy that all this not only can be escaped, but is escaped, in the supra-pubic operation.

The next *bête noir* of the perineal operation is urinary infiltration. It cannot be questioned that in this latter operation the larger the stone the greater the danger of contusion, and, therefore, the greater the danger of urinary infiltration. Now, in supra-pubic cystotomy, the danger of infiltration is practically nil, for the reason that there is no deep dissection of parts, that the urine passes gently upward and outward, and cannot lie collecting and dissecting by gravity into the adjacent structures. The danger of infiltration in the supra-pubic incision can only be said to obtain when an attempt is made to close the incision, and hence it has become an axiom in the operation that the incision is better left open. There is found to be but little danger of fistulæ—in fact, the great difficulty is to keep the bladder open as long as necessary. Accordingly we see that the three paramount dangers of the perineal operation are absent in the abdominal operation, and that theory and anatomical facts combine to demonstrate the legitimacy of the newly adopted operation. Now let us further consider some of the points in which it is asserted that the lateral operation for stone is superior. In children, for instance, where there is less danger of extensive lacer-

¹ Read at the Philadelphia County Medical Society, November 11, 1891. For discussion, see page 484.

ation, it is claimed such is the case. Let us see. A year ago I said to Dr. Deaver: "I am going to do a supra-pubic cystotomy for stone." The question was: "What is your case?" The answer was: "A boy, three years old." Again the answer: "You have a favorable case," and the opinion was justified by the result. It must be remembered that in children the bladder is rather an abdominal than a pelvic organ, and that lying higher it is more readily reached. In the case just referred to the recovery was absolutely uneventful. After the first day the child lay comfortably in bed, playing, with neither fever nor pain. In great contrast with this case comes the report in a volume of the *Transactions of the Southern Surgical Society* in which a vaginal cystotomy was done upon a child six years old. Imagine the consequences at their best—the laceration, the pain necessarily supervening; but take into consideration subsequent operation for vesicovaginal fistula, and the too late concession of the operator, that had the size of the stone been suspected, the supra-pubic operation would have been selected. Herein lies the folly of choosing any operation instead of another which will answer all conditions, because in tradition no alternative has been preserved. I take it to be a surgical postulate that in every instance that operation should be selected which promises the greatest relief with the least danger or discomfort to the patient. It is not a question of what operation we are used to performing. It is which operation best covers the ground. The argument has, up to this point, been directed to cystotomy from the standpoint of operation for calculus. It is not limited to this, however. In the male we have prostatic disease, than which there is no greater bane to old age. Hitherto the only relief was by constant catheterization. Now it is a recognized procedure to drain the bladder permanently from above. No one needs further argument than the cases reported by McGuire, of Richmond, and of the Davises, of Alabama, to be convinced that this operation to old men is the greatest possible boon. Not only is the bladder drained, but the prostatic enlargement is itself removed with the greatest success, and in many cases the disease permanently cured. Belfield, of Chicago, a year ago gave an exhaustive tabulation of this operation, and its success places it among the most important additions of the day. It now becomes evident that since drainage is a most important element in the treatment of chronic cystitis in women, a most desired step is attained, by which the woman with comfort and cleanliness is able to go about while she is being cured, with no discomfort, and cleanly. McGuire gives as his opinion that there is no difficulty of so managing the supra-pubic opening so that the urine can be retained for six hours. This being the fact, there is no longer reason for drainage *per vaginam*. By this it will be seen that in all cases in which it is intended to open the bladder the supra-pubic operation gives most assurance of all round success, whether in adults or children, whether the disease be simple inflammation or chronic prostatic enlargement. This is my experience, both in operations upon the child and adult. It is evident also that in lieu of an encysted calculus the operation is absolutely sure of success.

The details of the operation are exceedingly simple. Much has been written that tends to produce an impression that the steps are more or less complicated. No special instruments are needed. A bistoury and a few artery clips are all that is required—additional instruments only being called for according as to the conditions met after exploration. The injection and washing out of the bladder are, I believe, all that the surgical aspect of the operation requires.

The bladder can be easily reached both in the child and adult without packing the rectum. The relative size of the bladder in the adult and child is to be regarded, care being taken not to over-distend the viscus. The incision is made close down to the pubis, and two pairs of artery forceps used as retractors, as the incision is deepened, obviates all necessity for special instrument or additional procedure. The supra-pelvic fat is pushed asunder with the finger, and the bladder comes into view or is easily felt at the bottom of the wound. The viscus is easily raised into the wound by the forceps applied again after the manner of using them to raise the peritoneum, and the incision is readily made. The forceps can still be retained in position, or, if deemed expedient, a thread can be introduced by which control over the edges of the wound is maintained. The subsequent procedure is now dependent on the operation to be done. If drainage only is intended, a rubber tube is stitched into the wound or a hard drainage-tube retained by simple means.

If a calculus is to be removed, the procedure is as simple as taking a cherry from its seed. The operations for tumor and prostatic disease are, of course, more extensive and dangerous, and these it is not the purpose of the paper to consider, but only to call attention to the fact that their removal by this operation becomes more a matter of surgery and less of experiment than by any other means whatsoever.

Finally, for the operation all can be claimed that simplicity, accuracy, and safety can commend. The so called statistics of the operation before it was fairly tried, or used for other than forlorn cases, cannot be used either to condemn or recommend it. Its results, as obtained at the present time by exact surgeons, working thoroughly and entirely from an anatomical standpoint, give it a record unequalled by any other method of dealing with the surgical diseases of the bladder.

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, November 11, 1891.

The President, JOHN B. ROBERTS, M.D., in the Chair.

THE MEDICAL TREATMENT OF CYSTITIS.¹

WAS the subject of a paper by DR. JAMES TYSON.

DISCUSSION.

DR. H. SLOCUM: I am sorry that Dr. Tyson did not say something about diet—about such articles as tomatoes and asparagus, particularly the latter.

In the local treatment of cystitis I have obtained good results from the use of boracic acid, 2 drachms to a pint of water, used warm. This is introduced with a catheter with a little funnel. I have recently seen described a method of washing out the bladder by means of a catheter introduced into the urethra. To this is attached a tube, and the fluid is allowed to enter by hydrostatic pressure.

I have also used boracic acid internally. This, in 10-grain doses every two hours, has been of more service than anything else that I have tried.

DR. T. S. K. MORTON: In the treatment of chronic cystitis, I have found most satisfaction from the use of salol in conjunction with milk diet. I have the

¹ See page 476.

greatest confidence in the administration of salol, in doses of from 3. to 5 grains, repeated several times daily. The theory is, that in the kidneys salol liberates carbolic acid. While many cases have been benefited by the use of the drug, in other instances it has, like everything else, failed.

I feel convinced, also, that I have had good results from the internal administration of cocaine, owing to its diuretic action. I think that it has some local effect upon the bladder.

A third drug from which I have had good results is sandle wood oil, and the preparation mentioned by Dr. Tyson (Midy) is the best; but it is objectionable on account of the fact that it is largely advertised, and the name of the manufacturer is stamped on the capsules, thus giving to a certain class of patients a clue to their treatment, which is an advantage neither to them nor us.

DR. GEORGE E. SHOEMAKER: I wish to add a word in regard to the internal administration of boric acid. I have, in the past four years, used it in a number of cases with a great deal of satisfaction, giving it in doses of from 5 to 8 grains every two hours, in plain water or cinnamon water. I have used it with benefit in one case of perineal fistula of long standing in the male. Of course, all medical treatment is subsidiary; but this is the drug which has given me most satisfaction.

DR. CHARLES P. NOBLE: I have heard no mention of benzoate of ammonia or benzoic acid. I have found these drugs of great advantage in foul alkaline urine. Under some circumstances I have had good results from boric acid. Rest, a restricted diet, and leaving off meats, have had a good influence. Locally I have used a saturated solution of boric acid, and rarely have had to reduce the strength of this. I wash out the bladder every second or third day. I have seen good results from *triticum repens*, particularly in cases where *ardor urinæ* was very marked. Better results can be had by combining it with tinctures of aconite and belladonna, and with bromide of sodium. In summer time a pleasant remedy is watermelon, used freely. This, as is well known, is a powerful diuretic. It gives a bland, un-irritating urine, and in a measure avoids the necessity for irrigation.

My experience in the treatment of cystitis has been largely with women. A growing experience makes me the more convinced that cystitis has some local cause, as a rule, which must be sought for and removed. In women a torn perineum, resulting in cystocele, and tubo-ovarian inflammation are the most common causes of cystitis. When these conditions receive appropriate treatment the cystitis disappears.

DR. JOSEPH HOFFMAN: There is a combination of three drugs which I have used with benefit—these are benzoate of ammonium, salicylate of sodium, and bromide of potassium. The last is a local sedative. I think that benzoate of ammonia is perhaps the most efficient of all remedies in chronic, and even in acute, cystitis. The salicylate of sodium is also of value. The mechanical treatment should not be forgotten. It is absolutely impossible to cure acute cystitis with the patient going about. Rest is an important factor in the treatment. It is only by rest in bed that we can secure absence of abdominal tension, which is important.

DR. DONNALLY: In one or two instances in which I have used iodoform, in the proportion of 2 grains to the ounce in 4 drachms of mucilage, it acted very efficiently, and prevented ammoniacal decomposition.

DR. LONGAKER: I have found benzoate of ammonium most effective, but prefer to give it with belladonna rather than with bromide of potassium. Ten grains of the salt, four times a day, is sufficient.

DR. MARY E. ALLEN: In one case where I tried a number of remedies without effect, benefit followed the use of fluid extract of buchu in conjunction with Buffalo lithia water and a diet consisting principally of milk and vegetables.

DR. TYSON: I have had no experience with asparagus as a therapeutic measure in cystitis. Boric acid and benzoic acid I quite forgot to mention in the paper, which was prepared hurriedly. I have used them both freely. Benzoic acid has the disadvantage of affecting the stomach unpleasantly. I have not used benzoate of ammonium, but shall take the first opportunity to give it a trial. I cannot say that I have seen any curative results from boric acid or benzoic acid. They affect the urine favorably. I have also used salol, but have found it very uncertain. In one case, where the disagreeable odor of the urine was complained of, I gave salol in large doses, without any effect.

THE URETHRA, BLADDER, AND URETERS DURING PREGNANCY, AND THE PUERPERIUM.¹

The above was the title of a paper by W. H. PARISH, M.D.

DISCUSSION.

DR. M. PRICE: I agree with Dr. Parish that the traction-rod forceps should be the only ones used. I disagree with the statement that bladder injuries in labor are more infrequent than formerly. I believe that they are more frequent. The reason that we see fewer of these cases is that in every town there is now a man who is able to close these fistulæ. In the last few years I have seen many injuries of the bladder that have not been recognized.

I agree with Dr. Parish that an intelligent attendant should prevent most, if not all, of these accidents by his knowledge and care of the parts involved, and his investigation of the condition of the bladder during labor.

DR. CHARLES P. NOBLE: I wish to say a few words in regard to the use of violence in forceps delivery when the head is high in the pelvis. I am satisfied that it is not uncommon for men to deliver with all the power they have. This undue use of force is certainly injurious to the bladder as well as to the other pelvic organs. If the forceps are put on before the cervix is well dilated, it is very apt to happen that the anterior lip of the cervix and the bladder, are drawn down in front of the head and are in great danger of contusion. So far as primary injury of the bladder is concerned, I am satisfied that not a few cases are due to great force used in delivery. I quite agree that the amount of force required can be lessened by the use of traction forceps. I think that too much cannot be said about the inadvisability of trying to deliver a large head through a small pelvis by the use of great force. This subject has been agitated recently by the introduction of a new forceps by Dr. McGillicuddy, called the "anti-craniotomy forceps," to be applied to heads too large to come through a given pelvis. The idea of drawing children through pelves relatively too small cannot be condemned too strongly. The natural result is serious or fatal injury to the mother and a dead or "spoiled" baby.

I was brought up with the idea that after delivery a woman should not be permitted to move; but un-

¹ See page 478.

der the teachings of Dr. Goodell and others I have allowed women more latitude, and have seen no reason to regret it. Very often, if a woman turns over on her elbows and knees, she can lean back and pass water in a chamber placed between her feet, without getting out of bed. Of course this should not be permitted in feeble women, or where there is danger of hemorrhage. In this way the use of the catheter can be avoided, and likewise a possible catheter cystitis. The position likewise favors drainage of the lochia, and, hence, is an efficient and natural antiseptic precaution. Women who are allowed some liberty in the bed are much more comfortable than under the old method of treatment.

DR. JOSEPH HOFFMAN: I am glad to hear a man of Dr. Parish's experience urge the use of the traction forceps to save the bladder. I use it always, and have never seen any injury to the bladder. It has been said that with the traction forceps less force is used. In reality more force is used, but it is applied in the line through which the head escapes, and no force is wasted on the soft tissues as is the case with the ordinary instrument.

DR. DANIEL LONGAKER: I consider the use of the catheter after labor as very undesirable, and my experience is that its use can almost always be avoided by allowing the patient a little liberty. I have had a series of fifty cases in which I did not once use the catheter. Then there occurred a case of premature labor in which the dilating stage was protracted and the second stage prolonged. The patient was unable to pass water without the use of the catheter.

The statement that injuries of the bladder are as frequent or more frequent than formerly is, I think, incorrect. I think that it is a fact that the Women's Hospital in New York owed its birth to the number of cases of vesico vaginal fistula, and the treatment of these cases formed a large part of the work of the institution. Now the cases of that trouble treated there are very few indeed.

DR. PARISH: Dr. Price has unintentionally quoted me somewhat incorrectly. I did not say that injuries of the bladder were less frequent, but that vesico-vaginal fistulae were less frequent. I do not believe that the injuries in the aggregate are less common. Prolapse is probably more common than before the general use of the forceps.

In preparing this paper I was compelled to refer to some points but briefly. In regard to sitting up or turning over on the knees after confinement, one must be careful that he does not permit a patient to sit up who should not. We must consider the individual cases; otherwise great harm would result.

THE RATIONALE AND TECHNIQUE OF SUPER-PUBIC CYSTOTOMY.¹

Was the subject of a paper by JOSEPH HOFFMAN, M.D.

DISCUSSION.

DR. JOHN B. DEEVER: Simplicity should not, under all circumstances, be the best recommendation of an operation. I grant that many do supra-pubic cystotomy because it is simple. The left lateral operation is also simple. I have never had a death from the operation; I have never seen the dangers to which Dr. Hoffman refers. Uncontrollable hemorrhage and extravasation should not occur. The greatest danger was not mentioned him—that is, wounding of the spermatic duct.

There is no one operation for stone in the bladder, but each case must be judged on its merits. The ideal operation for stone in the bladder is litholapaxy, after which the patient can usually be up in five days. It, however, requires experience and manual dexterity. To do it successfully requires that one should have done it several times. Anyone can do the supra pubic operation. It is, however, not simplicity alone, but the merits of an operation that should determine its value.

DR. M. PRICE: Dr. Deaver has given us the strongest reasons why the supra-pubic operation should be selected. The fact that anyone can do it must be an argument in favor of the operation.

An argument against the perineal operation is the fact that in 50 per cent. of the cases of that operation the spermatic duct is injured. The supra-pubic operation has no such risk, and there are no large vessels which may be injured, as is the case in the perineal operation. The supra-pubic operation, also, is preferable to crushing. Sir Henry Thompson has had a number of deaths, although he has crushed many cases.

DR. JOHN B. ROBERTS: I feel that I am almost entirely in accord with the reader of the paper. Ever since the publication of the paper of Dr. Dulles, some fifteen years ago, I have felt that the supra-pubic operation was a most desirable one. He soon convinced me of the correctness of his position upon anatomical grounds. In a discussion of this subject before the American Surgical Association, in Washington, in 1884, gentlemen of skill and experience took the position of Dr. Deaver, that it was a good operation, but that the operation *par excellence* was the perineal incision. Dr. Tremaine, who read the paper favoring supra-pubic operation, was entirely in the minority. At that time I said: "I venture to say, that within ten years the supra-pubic operation will be the operation adopted for all cases of stone that are not treated by Bigelow's operation." This was before the brilliant results of supra-pubic cystotomy for tumors of the bladder and enlarged prostate. The supra pubic route is certainly the most desirable for those who are but seldom called upon to remove cystic calculi. Those who have undertaken to teach students perineal lithotomy, well know that such inexperienced persons almost as often get between the bladder and rectum as into the bladder. The upper route is accompanied by few complications and gives an opportunity to explore the bladder. From my experience I would say that it is the easier operation and the better one for the tyro.

DR. A. H. HULSHIZER: I have seen only two cases in which crushing succeeded, but I have seen four in which it failed; in two cases the lateral operation was resorted to, and in two the supra-pubic incision. I think that the supra-pubic is far better than even crushing.

DR. G. BETTON MASSEY: Hypertrophy of the prostate is often regarded as a hopeless condition, both from a medical and surgical standpoint. I have, however, recently had two cases of cure of the prostate enlargement. The first case was that of a gentleman seventy three years of age, who was sent to me some years ago with an old standing enlarged prostate. He was treated by me after the plan of mild negative electrolysis in the urethra. The applications were made twice a week, the current-strength being from 5 to 10 milliamperes. I subsequently increased the dosage to 25 milliamperes, which produced considerable irritation. The duration of each application was from three to five minutes. This was repeated three

¹ See page 481.

or four times, when I lost sight of the case. Two years afterward I met the physician who sent him to me, and learned that the patient claimed that he was entirely well.

The second case was that of a gentleman seventy-four years of age, who for two years had dribbling of urine, and finally had complete retention, necessitating the use of the catheter. The prostate was so large as to interfere with defecation. There was complete retention but no cystitis. In this case I applied to the prostate gland a current of from 25 to 40 milliamperes, with the negative pole electrode, consisting of a silver prostatic catheter insulated to within an inch of its extremity. There was hardly any sensation of pain and no irritation following the application. The current was simply turned on and then off. I did not use electrolysis but a galvanic constricting current. I obtained a galvanic effect on the semi-muscular organ. I also used the faradic current and the galvanic current in the rectum, employing from 60 to 70 milliamperes. As a result of a month's daily treatment, the man empties his bladder completely, and the prostate is shrunken two-thirds. If we have an agent which can contract these organs, its use is preferable to operation which ablates only one part.

DR. HOFFMAN: The key to the situation is, that Dr. Deaver uses tradition and not logic. Dr. Ashurst, in the last edition of his *Surgery*, does not recognize the importance of the operation. Dr. Agnew, in a paper in the *University Magazine* uses the expression that he does not see the sense of going into a house by the roof when you can get in by the cellar. It, however, does make a difference if there is dynamite in the cellar.

There is one other claim for the supra-pubic operation, and that is its use to afford drainage after operations on the male urethra. In all such operations there is great danger of extravasation, especially when a new urethra is to be made. By supra-pubic incision, this danger can be avoided and the wound can be attended to properly, and healed without the additional danger of urinary infiltration and irritation.

The Polyclinic.

JEFFERSON HOSPITAL.

DR. GRAHAM presented a child with dilatation of the stomach, and gave the following methods of verifying diagnosis:

Take a small rubber tube, put cosmoline on the end, and pass it back into the œsophagus, and further into the stomach, instructing the patient to make no effort in swallowing. Pour into the stomach as much as it will hold of sterilized water, or water slightly acidulated with salicylic acid. When the stomach is full, the outline of percussion dulness gives the outline of the stomach. The organ may be emptied by dropping the end of the tube below the level of the stomach, when it will empty by siphonage. Should gastric ulcer be present, this procedure might cause rupture; otherwise there is no danger.

Another method has been devised by German surgeons—that is, passing a catheter into the stomach by the mouth, and following the movements of the catheter in the stomach.

A third method is by distending the stomach with gas. Bicarbonate of soda and tartaric acid are given, followed by a glass of water. Gas is then generated,

and the dilated stomach may readily be outlined by percussion.

Treatment.—Remove the cause, which often is a rachitic anæmia or cachectic condition. Then attend to diet; give as little food as possible, in such form as will be easily digested. Lavage is very successful in helping to remove the condition. Medicinal treatment does not amount to much. Strychnine, on account of its tonic action on the muscular structure of the stomach walls, is recommended.

The child was given gtt. ij tr. nux vomica, three times daily, ordered to have its stomach washed out every third day with warm sterilized water, slightly acidulated with salicylic or benzoic acid, and its diet was restricted.

In vaccination, scratch just deep enough to cause a slight amount of bloody serum to exude. If you scratch freely, the blood flows freely over the vaccinated part and washes the virus off, so that instead of an absorbing surface you have one from which the virus is being washed away. On the third or fourth day, when the arm begins to get red and itch, plain zinc ointment or cold cream are nice applications. It will hardly be necessary to treat the child further; if feverish, give sweet spirits of nitre, or sulphate of magnesia to keep the bowels open. If the scab is scratched off, treat the resultant ulcer antiseptically.

—Graham.

In typhoid fever, before and after the cold bath, always give stimulants. Never allow the patient to remain in the bath until the temperature reaches normal, because it continues to fall after removal from the water.—Graham.

In giving ether, sometimes I am in the habit of asking patients to count slowly as loudly as possible. Yesterday I asked a most intelligent man to count, and he succumbed when he reached eight. I have never known a man or woman to count more than forty-eight. They must be instructed to count slowly and as loudly as possible.

When you expect the operation to be attended with much shock, about three quarters of an hour before the operation give the patient half a glass of whisky, and, where there is a weak action of the heart, give hypodermics of strychnine, gr. $\frac{1}{16}$, and tincture of digitalis, $\mathfrak{m}\times$.

If the patient has a great deal of nausea after etherization, what can you do? The books generally discuss it by saying it will pass off. When you have such a case, you will feel like passing off yourself. Iced drinks and carbonic acid water are good. One of the best remedies is chloroform, gtt. iv or v, with gtt. ij or iij of vinegar of opium, given two or three times a day. That will sometimes allay vomiting. Another plan, when you have reason to think there will be great nausea or vomiting, is to put your patient to sleep. A great many surgeons are opposed to morphine or opium after operation. Before the operation, I am apt to give a little brandy or whisky and a little morphine hypodermically; it that way I do away with the necessity for giving a large amount of ether. Usually, after operation, I order a hypodermic, gr. $\frac{1}{8}$, of morphine. It is not only to alleviate pain, but to give the patient and the stomach rest. It controls the nausea and puts the patient to sleep, giving the stomach and nervous system time to recover themselves.—Brinton.

The Times and Register

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QUACKERY.

THE public press lately contained an advertisement of an anti-rheumatic ring warranted to cure every form of rheumatism, in which was a number of glowing testimonials from those who had been cured by making use of this simple and easy remedy. Had these testimonials been over the name of hod-carrier Sam or carter Aleck they would hardly have caught the eye; but when instead the names of prominent business men were seen; men of standing in the community; men of brains; men who would examine any and every business proposition in the strict and exacting lines of cold reason, and who, the more flimsy and impracticable a prospect were, the more quickly would fling it aside—when such men eagerly pay two dollars for a one cent ring and freely allow their names to appear in connection with as brazen a piece of quackery and idiocy as ever was perpetrated, it is enough to make the whole profession groan in unison. Barnum was right. The people like to be humbugged. Especially does this obtain in anything medical. People are fond of mystery, and will pay fancy prices to an ignorant mountebank for some mysterious nostrum guaranteed to cure everything from toothache to tetanus, rather than give a modest fee to a reputable, intelligent physician.

There is a quackery in this city whose owners profess to cure consumption even in its last gasp, by the use of a secret gas with a fetching name. In proof of their claims may be seen at any time a large room with shelves to the ceiling, filled with warm testimonials from people who had one or more of their lungs gone, and had been given up by all the doctors for miles around at the time of sending for the nostrum; but who, after a short course of home treatment, picked up amazingly, and are now phenomenally robust, living witnesses to the humbug's efficacy. Another set of men modestly claim only special powers in the cure of catarrh; but as they are able to trace every ailment brought them to a catarrhal origin,

their claim is as fully as good as if they professed ability to throttle every disease mentioned in the systems of practice. These gentry remind one of the famous man who could turn everything into fits. At first glance this statement does not look promising; but the explanation of his success was the fact that, to paraphrase his own choice language, he was "Gehenna on fits." Individuals are constantly making their own diagnosis of Bright's disease from a little pain in the lumbar region and a brick dust deposit, swallowing a few bottles of some well advertised nostrum, and glowingly testifying to having been snatched from the jaws of a lingering and certain death.

This widespread disposition on the part of the public to prefer mystery, trickery, monstrous claims and absolute lying to intelligent treatment and the simple truth, makes the medical straight and narrow road a most difficult one to travel, since most of the allurements lead into paths of unrighteousness.

The young man who left his college filled with noble thoughts, with exalted aspirations, his brain still teeming with the graduation words telling of the highness of his calling, the grandness of his profession, and of the Godlike character which it should be his ideal to attain, has plenty of time for serious reflection during the six months he sits in his office waiting for the first patient to ring his bell.

If out of office hours he should mingle with other physicians, and should hear them talking of the difficulties of legitimate practice and the occasional tricks of the trade, he might perchance learn of the great Dr. Paresis, of New York (whose real home is known from the Atlantic to the Pacific), who prodded a wealthy man lightly with a trocar, showed him a pint bottle of sour cream, and charged him a thousand dollars for aspirating an abscess of the liver. Or somebody may tell him of the eminent Dr. Sharpey, of Philadelphia, who has been known to give a patient plus glasses when he needed minus, telling him at the same time to come back in three months if the glasses did not prove satisfactory; and at the end of that period securing another fee for the correct adjustment. A few more tales of this kind may incline our one time noble minded young man to attempt a little hocus-pocus on his own account, to see whether by this means he cannot more easily and certainly keep on the sunny side of his landlord. Not being so skillful as are these older and more eminent men to perform all things ethically, one act may lead to another until he finds himself transformed into a full-fledged quack. Indeed, since the vast majority of people prefer mystery, impossible promises and magnificent lying to the plain unvarnished truth, the wonder is not that there are so many out and out quacks, but that there are so few.

Apropos of this disposition of the multitude, an amusing story in one of the English journals, read some years since, comes to our recollection; the only legacy a certain father left his son was his last words: "My boy, remember Edward." It seems that in his childhood the boy's father had impressed on him a tale relating to two brothers, Tommy and Edward. Tommy was bad, and though like the Sunday-school

boys of twenty or thirty years ago, he flourished for a time, ultimately he came to a miserable end. Edward, who was good, experienced, on the contrary, hard lines for a season, but after a thorough seasoning (if the reader will pardon), he attained the realization of his wildest dreams and lived happily ever afterwards. Filled with a righteous desire to obey his father's last admonition, and remembering the brilliant rewards that Edward reaped, our hero refused, on a number of occasions, to perform or connive at a little trickery that it seemed certain would result in much material benefit; with the result that each refusal reduced him lower and lower, besides depriving him of assisting friends, until he finally found himself in the depths of misery without a friend or a farthing to bless himself with. In the bitterness of his heart he consigned Edward with all his ways and works to limbo, vowing he would be Tommy the next chance he got. As he mused thus sitting by the wayside puffing bits of dust with an eye dropper he chanced to have, a countryman happening by asked him what that was: "This is the celebrated medicine, 'Ton dapei-men-a-bos-okus-Achilles,' he answered, quoting the first line of Homer that occurred to his mind, 'a perfect cure for every trouble of the eyes.'" Hereupon the countryman begged that he would put a little of the medicine in his eyes, as they were sore. Accordingly the disciple of Tommy blew a puff or two of dust in the man's eyes, and was immediately rewarded by a declaration that he could see better already, and an offer to buy a box of the dust. This our now thoroughly wicked young man sold him for five shillings, taking an additional shilling for the dropper, which sum he invested at the first opportunity in more boxes and droppers. Judicious advertising, assisted by warm testimonials from those who had been cured, brought him a ready sale, and he eventually made an enormous fortune, selling the dust at a guinea per box, and charging a shilling extra for the little instrument with which to blow it into the eye.

E. B. SANGREE.

Annotations.

NEW LATIN.

VERY little Latin is made use of in modern medicine; but even that little occasionally trips up some one. An article in a late journal speaks of "the great *desiderati* of our day." This wrong termination is hardly as bad as one that appeared some time since in a large daily paper. The editor, referring to certain vehicles, spoke of them as "omnibi." Mistaking the *us* of an already plural ending for the singular, and repluralizing it, is decidedly funny.

A DOUBTFUL PROTECTIVE ASSOCIATION.

WE notice in the *Maryland Medical Journal* a warning to physicians not to be duped into joining the so-called United States Medical Practitioners' Protective Alliance, since its promoters are men of no ethical standing. Indeed, the founder was expelled from the State Medical Society of Maryland for advertising in the public press, and

one of its present chief officers is associated with a certain Bureau of Medical Relief, whose principles are condemned by reputable Baltimore physicians.

That physicians should have a protective association is greatly to be desired; but we do not want one whose benefits consist chiefly in a \$3 fee to unreliable officers.

IT WAS NOT INSURED.

A YOUNG vaccine physician, starting out a few days since, had all the spirit taken out of him when, after stopping at the first house, and just in the act of inquiring if there were any children to be vaccinated, he was interrupted by the loud, shrill voice of a parrot inside, shrieking: "Yes, we're all insured!" People across the street looked over and laughed, and the abashed young man had barely begun again when the parrot once more cried out: "Yes, we're all insured but me; and they won't insure me!" An amused crowd was about by this time, and the young doctor, thoroughly out of countenance, beat a hasty retreat, followed by this parting scream from his interested tropical conversationalist: "Ain't you going to insure me?" He says that another experience like this will make him resign and try something else.

CHARITY IMPOSED UPON.

THE greatest of the virtues is frequently imposed upon by those who prefer begging to working. This imposition is especially common in a large city. Some time since, a Philadelphia charitable organization, composed of the gentler sex, had its sympathies strongly enlisted by a pitiful tale of want and destitution in a family, the acme of distress seemingly having been reached in the death of the father. Several of the young lady members of the society visited the bereaved household, carrying with them, besides a generous sum of money for funeral and other expenses, a goodly amount of provisions and clothing. At the stricken house they saw the father's form stretched on the rude bed, his desolate and sorrowful family scattered about the room, giving vent to their grief. Touched to the heart, the young ladies, after doing all they could for the comfort of wife and children, in addition to leaving the gift of money, silently withdrew. One of them, however, having forgotten something, returned in a minute or two for it. Judge of her surprise at seeing the "corpse" sitting up in bed, eagerly counting the charitable dollars, his happy family gathered close around the bed looking on, whilst smiles over the success of their little scheme coursed up and down the cheeks but lately bedewed with tears.

Book Notices.

THE MEDICAL NEWS VISITING LIST FOR 1892. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 176 pages of blanks. The 60-Patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, pocket, pencil, rubber, and catheter-scale, etc. Seal grain leather, \$1.25. Philadelphia: Lea Brothers & Co., 1891.

Has been thoroughly revised and brought up to date in every respect. The text portion (32 pages) contains the most useful data for the physician and surgeon, including an alphabetical table of diseases,

with the most approved remedies, and a table of doses. It also contains sections on examination of urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers, and the ligation of arteries. The classified blanks (176 pages) are arranged to hold records of all kinds of professional work, with memoranda and accounts. Four styles are now published: Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month, and good for any year); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). This last style consists of 256 pages of assorted record blanks, without text. "The Medical News Visiting List" adapts itself to any system of keeping professional accounts. Each style is in one volume, bound in handsome red leather, with pocket, pencil, rubber, and catheter-scale. Price, \$1.25. When desired, a ready reference thumb-letter index is furnished, which is peculiar to this visiting list, and will save many-fold its small cost (25 cents) in the economy of time effected during a year. In short, every need of the physician seems to have been anticipated in "The Medical News Visiting List."

RECORDS OF THE ASSOCIATION OF ACTING ASSISTANT SURGEONS OF THE UNITED STATES ARMY. A. D. 1891. Edited by W. THORNTON PARKER, M.D., Recorder A. A. A. S. Salem, Mass.: Salem Press Publishing and Printing Company, 1891.

These records form interesting reading, and are an important contribution to our war history. They ought also be influential in bringing about some change in the status of a highly useful and necessary officer, the acting assistant surgeon. Says the author: "As a matter of fact, the army medical department must acknowledge that great injustice has been done to worthy medical men in forcing acting assistant surgeons to endure humiliations which have never been lessened, but which, on the other hand, are so grievously wrong that it is indeed a wonder that such men have been willing to serve at all."

Pamphlets.

CATARRHAL HEADACHE. By WILLIAM CATHELL, M.D., of Baltimore, Md.

FOOD BEFORE SLEEP. By WILLIAM T. CATHELL, M.D., of Baltimore, Md.

The Medical Digest.

A FATAL case of aconite poisoning is reported in the *British Medical Journal*. A woman, aged fifty-eight, took by mistake 9 minims of aconite liniment; equal to 5 grains of the root, or $\frac{1}{80}$ grain of aconitine. She died in four hours. Other patients who took the same dose recovered. Aconite in full doses should not be administered oftener than six hours.

DR. M. I. ARNSTAMOFF calls attention to the danger of eating raw salt fish. He has clinically observed eleven cases of fatal poisoning from this cause. The fishes, the eating of which had produced the poisoning were salmon, beluga, sturgeon, and ssew-juga. Microscopical examination of the fishes showed great number of bacilli, their cultivation on agar-agar reminding him much of typhoid bacilli.

GEORGE FOY (*Med. Press and Circ.*) mentions an interesting case of what he calls cheiromegaly. Within a period of some two years, he dissected from her left hand several fibrous tumors. The removal of these was followed by a number of rapidly developing metacarpal growths, which necessitated the removal of three of the fingers, and which were of an enchondromatous character. After this operation, her hand which had been exceptionally small and well formed, began to enlarge until it was greatly deformed, though physically and psychically she seemed in every way different from persons in whom we meet with acromegaly.

C. BARETTA, of Paris (*British Med. Jour.*), in summing up an article on the use of dog's serum, in the treatment of tuberculosis says: "In all these cases it was remarkable to see how quickly the patient recovered his appetite, strength, and power of movement, while his weight gradually increased. As a rule, after a few injections, the patient sleeps better, the digestive functions become more regular; in some cases we find that coughing, expectoration, sweating, and hemoptysis, are diminished. Twice it was noticed in young women that long suppressed menstruation came on again. Lastly, in a number of cases, there has been a local improvement of the anatomical changes in the lungs, the larynx, the skin, bones, suppuration, etc. The favorable modifications were well maintained in several patients. These patients were in the first stage, or at most in the beginning of the second stage of the tuberculous evolution. Unfortunately, in most of the other cases the wonderful effects of the first days were not durable, and the tubercular evolution has only been delayed for a few months.

Dog's serum, in men as in animals, does not seem to have a special curative action against tuberculosis, but it possesses a powerful action, if not against the microbe, at least against its effects. It seems to act as a powerful tonic, and indirectly by improving the general nutrition puts the patient in a better condition to overcome his terrible disease. The blood of steers, tried by MM. Bertin and Pique, the serum of sheep, tried by Professor Lépine, seem to give similar results.

CLINICAL OBSERVATIONS ON THE USE OF BOVININE.—There appear in the medical journals, from time to time, reports of the results obtained from the use of certain drugs or medicinal agents, which, although the information may not be new, are an aid to the practitioner simply from his being reminded of them.

It is the same in reviewing an old book; we are very likely to come across some good suggestion which had passed out of our mind. It is in the line of a reminder that I recall bovine. We have all used it; some to a greater extent than others. There are certain cases where this blood renewer (for such it is, pure and simple) can have its place taken by nothing. In anæmic individuals with feeble digestion, where easy assimilation is desirable, a tablespoonful of bovine, together (if the stomach will bear it) with a tablespoonful or two of Royal Tokay wine, is a most useful tonic, and is especially valuable for anæmic or chlorotic females troubled with amenorrhœa. It is one of the very best adjuvants to proper medication in this class of cases.

Bovine is not a medicine *per se*; it is a food. It is even more than a food; it is, as Prof. Waugh, of Philadelphia, asserts, "one step beyond a food; it

has received the finishing touches, and has become the *vital fluid itself*, and whatever there may be of that mysterious quality known to us as vitality, this fluid alone possesses it;" for it is blood, and consists of the juices of lean, raw beef, obtained by a mechanical process, by either hot or cold, and contains by weight 26 per cent. of coagulable albumen, besides a small quantity of alcohol and boracic acid, and its mission is to supply blood to the impoverished system. Hence it is one of the most rational and efficient remedies we have with which to replenish the body which has lost a large amount of blood from hemorrhage. After railroad accidents, capital operations, "flooding," etc., it is *the* renewer to the exsanguinated body upon which we may rely.

In a case of "cross-birth" which occurred in my practice, complicated with placenta prævia lateralis, in which there was considerable hemorrhage before the placenta could be detached, and also in which the patient experienced considerable shock and weakness on account of the manipulations of "turning" and loss of blood—after the immediate stage of stimulation, which had to be resorted to, to keep the patient's heart beating, had passed, she was ordered bovine, a tablespoonful to be taken four or five times a day, until gradually she could take milk and other light but nourishing food.

I have found bovine of service in the treatment of gastric catarrh, and as a sustaining measure, given in small quantities, to children suffering from summer diarrhœa, as well as from anæmia and scrofulosis. In typhoid fever with ulceration it will probably be absorbed by the intestinal tract more perfectly than any other food.

Another valuable use to which bovine may be put is in cases where feeding by the rectum is required. It seems to be the most reasonable food which can be introduced into the system by mere absorption. It is recommended, when employed in rectal feeding, to add to each ounce of bovine 10 grains of pancreatic extract and 2 ounces of water.

Bovine may be prescribed alone, or given in addition to iron, quinine, arsenic, strychnine, appropriate wines, or any tonic which may be indicated in any given case. Its taste, not more disagreeable than that of blood, for that is what it is, may be masked by taking with it some simple bitter, milk or wine. As a blood supplier it has no superior, and for feeble stomachs, where but little food can be borne, and it is desirous to have that little nourishing; for individuals in whom the corpuscular elements are few; and for those in whom the blood supply is small, owing to loss through hemorrhage, etc., this valuable remedy will be found most serviceable. The latest use made of bovine is as a local stimulator to sluggish circulation about indolent ulcers. In a case reported, W. H. May, M.D., of New York, "injected at six different points around an old, indolent ulcer, which was situated on the outer side of the leg of a woman fifty-eight years of age, Bush's bovine, in amounts of a drachm at each place, of a solution of one part bovine to three parts of boiling water, at a temperature of 110° F., the injections being made about an inch from the edge of the ulcer. This course was repeated every other day, slightly increasing the amount and gradually nearing the diseased edges as the healing progressed. He directed it to be washed frequently with hot sterilized water and covered with absorbent cotton 1-1,000 bichlor. In about one week signs of healthy granulations appeared. By March, 1888, (the treatment was begun in January), the swelling had greatly decreased, like-

wise pain and heat; diseased skin began to exfoliate, and it gradually healed, leaving slight scars similar to those subsequent to a burn, rather whiter in appearance than the surrounding skin."

Treatment was discontinued, except vaseline dressing, and in the following May it was entirely well, and has remained so. This is a novel and simple way of invigorating indolent ulcers, and one worthy of trial in this class of cases which so often baffle the best efforts to heal. From the facts presented it will be seen that in bovine we have a revivifier which is no less than the vital fluid itself, taken from the beef and so prepared as to render it assimilable in the human tissues.

Amenorrhœa.—About a year ago a school teacher applied to me for treatment, stating that she complained of a tired, draggy feeling, and that her courses were delayed. I at once saw that she needed a pretty vigorous tonic treatment, and especially something to increase the red blood corpuscles in her system. I ordered for her Tokay wine and bovine, two tablespoonfuls of the former and one of the later three times a day; at the same time I prescribed for her dialyzed iron, a teaspoonful in water three times a day. Her condition commenced to improve and in a short time her courses appeared, and also a rosy color to her cheeks.

Cholera Infantum.—In cholera infantum, where feeding demands so much care, I have obtained good results by withholding milk entirely, and administering a few drops of bovine in water previously boiled, at frequent intervals, until the stomach could with safety digest the customary diet.

Obstinate Vomiting of Pregnancy.—In a case of this kind, which recently came under my care, where the stomach would tolerate scarcely a teaspoonful of water, the first food that was offered to tide over the stage of reflex irritability, was bovine. It was at first diluted with water; afterward milk was gradually added until the bovine could be dispensed with.

Traumatic Peritonitis.—One of the most unique and dangerous cases which it has been my good fortune to bring to a successful termination was a case of traumatic peritonitis in a girl eight years old. Speaking only of the diet used in this case, where it was necessary to have it small in quantity and nourishing, owing to the condition of the bowels (nothing had been able to pass the bowels, and she was tympanitic to a great degree, until relief was finally obtained), and the stomach was extremely sensitive, and vomiting frequent from the whooping cough, She was given for food nothing but bovine, a half teaspoonful at a time at frequent intervals. Later on, after the tympanitis began to subside, she was given, with the bovine, milk and lime water. Cracked ice was allowed in moderate quantities.

—Pierce, *N. E. Med. Monthly*.

PROFESSOR KOCH'S FURTHER COMMUNICATION ON A REMEDY FOR TUBERCULOSIS.—As the result of further attempts to isolate the active principle of tuberculin, Koch finds that it is not either an alkaloid or a ptomaine, but is more nearly allied to the albuminoids. It is very difficult to isolate it in a pure condition as it readily undergoes chemical change. At each step of his experiments he has tested the action of the substances he obtained on animal bodies in order to determine whether the active substances were still present, and, if they were present, to determine whether he had obtained a complete or only a partial separation. Having already found that healthy guinea-pigs may be injected with large quantities of

tuberculin without showing evidence of reaction, these animals were useless for the present purpose. On the other hand, as tuberculous guinea-pigs react to comparatively small doses of tuberculin, although not so small as in the human subject—the rise of temperature and local symptoms which make their appearance being in themselves sufficiently pronounced in guinea-pigs to enable one to determine the reaction with a single injection, the only satisfactory method appeared to be to give a lethal dose of the tuberculin, or of substances derived from such a lethal dose to such animals.

The changes found at the seat of inoculation after death are a more or less localized injected area of subcutaneous tissue, which is reddened, often dark, almost violet in color; the neighboring lymphatic glands are congested; the spleen and liver in addition to the tubercle on the surface have numerous ecchymotic looking points or spots the size of a hemp-seed, very similar in appearance to those met with in other infective diseases; these, however, are not extravasations. The redness is due to the enormous distension of the capillaries in the immediate neighborhood of the tuberculous masses. These capillaries are so close together, and are so stuffed with red blood corpuscles that the blood stream has come to a standstill. Rupture of the capillaries and extravasations are exceedingly rare. Similar conditions are present in the lungs, but they are not nearly so distinctly marked; there is diffuse redness of the mucous membrane of the small intestine.

The most characteristic feature, however, is the presence of the hemorrhagic patches on the surface of the liver; this is seen best in guinea-pigs that have suffered from tuberculosis for four or five weeks before inoculation. Here the liver is crowded with numerous gray nodules, which have not yet developed the yellow spots and brown marbled appearance which supervene as caseation occurs. Once seen this appearance may always be recognized as due to the action of tuberculin.

The first attempts to separate the active principle were made with alcohol, and on mixing tuberculin with five volumes of absolute alcohol there was thrown down a brown resinous mass which became almost adherent to the bottom of the vessel. On testing this precipitate and the supernatant clear fluid, the tuberculin was found in equal quantities in both, so that this reagent alone was not sufficient to isolate the active substance.

Proskauer and Brieger, at Koch's request, tried nearly all the available methods of separating the active principle. It then occurred to Koch to mix alcohol with tuberculin in a much smaller proportion than in the earlier experiments—10 parts of tuberculin to 15 of absolute alcohol—the mixture being stirred, and allowed to stand for twenty-four hours. When this was done a white flaky precipitate was thrown down from a dark brown fluid. This fluid was carefully poured off, and 60 per cent. alcohol added, the mixture being stirred and then allowed to settle. This was repeated three or four times until the supernatant alcohol remained almost clear; the precipitate was again washed three or four times with absolute alcohol, the whole was filtered, and the filtrate dried in an exsiccator until it appeared as a snowy white mass, which after being dried at 100° C. lost from 7 to 9 per cent. of water and appeared as a light gray powder. Smaller quantities of the deposit may be freed from alcohol by evaporation over the water bath without the color being altered very

much, as in the case of the impure deposit obtained by precipitation by absolute alcohol.

The deposit obtained by precipitation by dilute alcohol is so much more active and constant than all the substances obtained by the various other methods that it may be looked upon as almost pure, 10 milligrams producing as much effect as 5 decigrammes of tuberculin, or as 50 milligrammes of the impure substance obtained by the addition of 100 per cent. alcohol; 5 milligrammes, and even 2 milligrammes, may give the distinct tuberculin reaction. The quantity obtained is about 1 per cent. of the tuberculin.

If the purified tuberculin is not very carefully prepared and preserved it always retains a small quantity of this insoluble substance, and does not give a clear solution, but the addition of a small quantity of sodium carbonate sufficient to give a distinctly alkaline reaction as a rule brings everything into solution.

On the other hand, solutions of pure tuberculin in 50 per cent. glycerine are very stable, a solution kept for four months retaining its original activity, and if the solutions have even a small proportion of glycerine added, they may be repeatedly evaporated and dissolved without the activity being impaired, whilst if a large quantity of glycerine be present they may be exposed to a comparatively high temperature (130° or even 160° C.) without undergoing alteration.

The percentage of ash, as obtained by Brieger and Proskauer, varied from 16.65 to 20.46 per cent. The ash consisted almost entirely of phosphate of potassium and magnesium. The elementary analysis made by the same chemists on three samples gave an average of 47.61 per cent. of carbon; oxygen, 7.62 per cent.; nitrogen, 14.54 per cent.; and sulphur, 1.15 per cent. From the varying constitution, however, and from the characters as described the purified tuberculin appears to be an albuminoid substance, but from the high proportion of ash and the uncertain reactions with certain reagents, such as acetate of lead and acetic acid, it is evident that the substance is not yet pure, and that the impurities consist of small quantities of albuminoids similar to the tuberculin, and of mineral salts which have no therapeutic significance.

Tuberculin appears to be most nearly allied to the albumoses, but differs from them and from the toxalbumins in the fact that it withstands very high temperatures; it differs from the peptones in many respects, but especially in that it is easily precipitated by acetate of lead.

Having obtained a pure tuberculin, it was necessary to determine whether the good effects of the crude substance, apart from the disturbing after-effects, could be obtained. The purified tuberculin was administered in varying doses of from 2 to 5 milligrammes to Drs. Kitasato, A. Wassermann, H. Maass, and E. Guttmann. In every case there was a rise of temperature proportional to the dose, sickness and faintness, shivering and perspiration, rapid pulse, headache, and sometimes muscular pains in the chest or in the abdomen, but in every case there was a return to perfect health within twenty-four hours. In the case of Herr A. Wassermann, who received 4 milligrammes of purified tuberculin, the temperature rose within ten hours from 36.9° to 39.5° C., then fell to 38.4°, rising twenty-seven hours after the injection to 40.2° C. With the first rise the subjective phenomena were slight, but with the second rise the pulse was so small and irregular and the subjective phenomena were so marked that it was deemed necessary to administer alcoholic stimulants. Whether there

was a possibility of the presence of tuberculosis in this last case was doubtful, but it was not out of the question; in any case, this experiment shows that it is necessary to be cautious in the administration of even the purified tuberculin.

A number of tuberculous patients in the Moabit Hospital were then treated with small doses—sometimes with the pure tuberculin and sometimes with the crude tuberculin—with the result that it was found that the pure tuberculin does not differ appreciably in its action from the crude substance, the diagnostic and therapeutic effects of both being essentially the same.

The pure tuberculin which in the case of guinea-pigs was proved to be fifty times as strong as the crude tuberculin, in the case of the human patient was forty times as strong. In fact, when administered, the pure substance appeared to have no advantage over the crude tuberculin. Whether the pure tuberculin is more stable cannot yet be determined. The crude tuberculin, which is a strong solution in glycerine, can be readily kept, and even in the specimens that have been kept longest there is apparently no deterioration.—*Brit. Med. Journal*.

BOWERMAN JESSETT (*Med. Press and Circ.*) records an interesting case of combined pylorotomy and gastro-enterostomy for carcinoma of the pylorus. The operation lasted one hour and forty minutes and was successful, his patient, a woman of thirty-eight, having gained greatly in weight and now going again about her duties. With regard to this operation the writer says:

"It will be observed that all the cases operated upon in this country by the method suggested by Billroth died within twenty-four hours of the operation, and it cannot be doubted that the cause of death was shock. In the three cases reported by Bull, one died of faulty suturing. Billroth's and Tubolski's cases of combined operation also died from the same cause. In Bull's successful case he occupied three hours in the operation, devoting one hour to ligaturing the omentum. Dr. Rawdon, in his case of successful pylorotomy, ligatured the omentum in a similar manner to the pedicle of an ovarian tumor, and this course was adopted by me in the case I am now reporting. It is thus demonstrated by these two cases in which this plan of dealing with the omental attachment of the pylorus was adopted, that it is a needless waste of time to attempt to ligature it in small sections.

The five cases that died after the combined operation of pylorotomy and gastro-enterostomy (I leave out Bull's third case, which died from a surgical disaster which may occur to anyone) all succumbed to faulty suturing. It behoves the surgeon, therefore, to be most careful in this respect, and here I will draw attention to the form of suture adopted by me in my case, viz., the *Quilt* suture as suggested by Halstead. By means of this suture a wide and strong surface of peritoneum and muscular coat is insured, which is not at all likely to tear out. Now in using Lembert sutures the surgeon will find to his chagrin that in pulling them together to tie, if the intestinal wall is at all rotten, or there is much tension, they are apt to tear the coats of the gut, and thus cause a faulty suture, from whence future trouble may be feared. With the *Quilt* suture I have never experienced this trouble; moreover, you do not require to insert nearly so many sutures as are necessary when adopting the Lembert suture. It is most important, too, that the surgeon should pass his needle well down through

the muscular coat into the sub-mucosa. It is often argued against this that there is fear of piercing the mucous coat. If, however, the surgeon will pinch up the coats of the stomach or intestine between his thumb and finger he will feel the mucous coat slip away from him; he may then with safety pierce and include in his suture all the tissues he has pinched up, and this will include the submucous coat. In tying the sutures care must be taken not to ligate them too tightly, as sloughing may occur if this is done. In all cases of suturing the divided end of the stomach or intestine a first continuous suture should be introduced passing diagonally through all the coats of the viscus, as described in the case reported.

Conclusions.—1. It will be obvious that the pylorus may be excised with safety in favorable cases; but the surgeon should be careful not to attempt its removal without it is quite free from adhesion to neighboring important organs.

2. In cases reduced by disease, as patients suffering from pyloric obstruction invariably are, the operation that can be performed in the shortest time must be the best, provided it can be performed with equal precision as the more lengthy operation.

3. The attempt to suture the divided ends of the stomach and duodenum by means of sutures should never be attempted. In favorable cases, where there is but little traction upon the divided ends, these can be united by means of approximation discs.

4. In all cases where the pylorus can be excised without interfering with neighboring important organs, it may be removed by adopting the combined operation of gastro-enterostomy with the pylorotomy. In cases where excision of the pylorus is inadmissible gastro-enterostomy should be performed.

5. Great importance must be laid upon the suturing of the divided ends of the stomach and intestine, and the only safe suture is the *Quilt*, or square suture adopted by Halstead and myself. Each case that died from the results of the operation, the failure was found to arise from faulty suturing. Lembert sutures are apt to cut through, and should not be relied upon.

6. The omental attachment of the pylorus should be tied *en masse* by transfixing and ligaturing in the same manner as an ovarian pedicle.

7. Gastro-enterostomy should be performed by means of decalcified bone plates, and for the sake of security four or five *Quilt* sutures should be placed around the upper edge and the two ends of the plates.

8. The jejunum should be caught up as near to its origin as possible, and a loop applied to the front of the stomach, so as there shall be no traction upon it; at the same time it is important not to allow too much slack on the proximal side of the junction.

9. On no account is it permissible to catch up the first loop of the intestine that presents itself, as by so doing, although the operation may be successful, the surgeon may find to his chagrin that his patient gradually loses flesh and dies in the course of a few weeks of marasmus. At the post-mortem examination it will be found that the loop of intestine secured to the stomach is only a short distance from the ileo-cæcal valve.

10. The opening into the stomach and intestine should be at least an inch and a half long, and should the mucous membrane protrude it should be cut away. By adopting this course I think all fear of closure of the opening will be prevented.

11. The patient should be fed by mouth early, in fact the same day; warm water may be taken, and the following day peptonized milk in small and repeated doses.

12. The patient should, on no account, be allowed out of bed for at least ten days to a fortnight."

DR. BEFORD BROWN, in the course of an article on "Systemic Infection from Gonorrhœa," cites five interesting cases of such infection. He believes that there are two channels for the absorption and transmission of the gonorrhœal microbe into the general system. One is by continuity of surface over the mucous membrane of the genito-urinary tract from the urethra to the kidneys. The other channel is through the medium of the great lymphatic system, from the lymphatics of the urethra to the inguinal glands, thence through the lymphatics of the system into the general circulation. He believes, also, that this microbe, so transmitted, is lodged at different points in the organism. The gonorrhœal microbe transmitted by continuity of surface over the genito-urinary tract, invariably induces specific suppurative inflammation. On the contrary, when transmitted through the lymphatics, the inflammation is not of a suppurative character, but assumes peculiar types; then the contact of the infectious microbe with the mucous surfaces produces suppurative prostatitis, cystitis, ureteritis, pyelitis, and then pyonephrosis. The absorption of the same through the lymphatic channels first sets up lymphangitis of the lymphatics of the urethra, then lymphadenitis of Cowper's glands, then of the inguinal glands, and inflammation of the connecting lymphatics. By further absorption it may induce septic phlebitis of the thigh, and finally synovitis, endocarditis, and internal destructive ophthalmitis. He also believes that, in certain cases, genuine septicæmia may be developed in the course of these complications. He thinks there is marked relative difference in the susceptibility of different constitutions to the systemic poisoning of gonorrhœal infection, as in other diseases. That the absorption and infection of the system from this cause is only in exceptional cases. The writer lays stress on gonorrhœal ureteritis following cystitis, as a part of the action of the gonorrhœal infection in its travels over the mucous surface of the genito-urinary organs toward its final destination in this direction, the kidneys. This complication is accompanied with pain, at times sharp and paroxysmal, usually dull and aching in character. These sharp paroxysms of pain extend upward to the kidney, and not downward toward the bladder, as in nephritic colic. Then, again, there is soreness in the entire line of the ureter, increased on pressure, so that the course of the canal may be marked out clearly. Ureteritis is always established before nephritis begins in gonorrhœal infection.—*Am. Med. Jour.*

SOME MORE DON'TS.—Mandatory literature has grown rather plentiful of late. Every now and then we have been greeted by a new array of Don'ts, relating to this or that aspect of the medical calling, until there seems but little left to warn against. We have Obstetrical Don'ts, Chest Don'ts, Surgical Don'ts, others that may have escaped my eye, and lately a long list of Syphilitic Don'ts, of which a few are given, in order that the reader may see how admirable and timely they are:

"Don't salivate your patient."

"Don't begin general treatment as soon as the chancre appears; it may not be a chancre." (*sic*.)

"Don't let your patient get diarrhœa; if it comes on, stop it."

From the character of these and many of the other don'ts, I conclude that those which have occurred to

me were omitted by the different authors either through an oversight, or because they did not wish to exceed a predetermined number, such as fifty or a hundred. I therefore hasten to rectify these omissions, in the hope that the several cautions, warnings, and suggestions which I append may be as serviceable to the busy practitioner as those which have gone before. Since the article is intended mainly for the benefit of the G. P., and not the specialist, I have thought it unnecessary to classify my Don'ts, but have jotted them down just as they occurred to my mind:

Don't ask a three months' old baby to put out its tongue; it may not understand.

Don't forget that the liver is on the right side, the spleen is on the left.

Don't tell a patient your medicine has done him good until you make sure he has taken it.

Don't tie the umbilical cord and then cut it between the ligature and the child; divide it on the placental side.

Don't forget, before closing the wound in an abdominal section, to count your assistants; one of them may be concealed in the cavity.

Don't spit on your hands before beginning an aseptic operation; the saliva has been shown to contain microbes.

Don't try to deliver a child with a shoe-horn; the regulation forceps are usually more satisfactory.

Don't cut down on a bone to ascertain whether it is broken; this method of making a diagnosis has not the general support of the profession.

Don't ask a woman how many children she has had until you discover whether she is married.

Don't remove the dressings each day and bend the limb to discover whether the fractured ends have yet knit together.

Don't neglect, before sewing up the wound in an abdominal operation, to enumerate the viscera; you may inadvertently have removed something that ought to be put back.

Don't give corrosive sublimate instead of calomel.
—Ernest B. Sangree.

Medical News and Miscellany.

A POLYGLOT WOOER.

Oh, Araminta Angelina Seraphina Spratt,
Te amo, ich lieb' dich, sas agapō, all that;
Could you but know the seething love of Junius Brutus Brown,
How ardens, pyrißōn, I cannot keep it down.

Oh, Chloe, Lalage, Phyllis, Love, all loving names e'er sung,
Adi cum me, komm mit mir, come, come in any tongue;
I beg you here most humbly, upon my bended knees,
To be my uxor, spouse, my gunā, weib, my anything you please.

THE Dosimetrist's motto: *Multum in parvule.*

PRESIDENT HARRISON'S Thanksgiving proclamation is about as neatly worded a piece of English as we have seen for a long time.

QUEEN & Co., the well-known opticians and makers of scientific instruments, have removed to 1010 Chestnut street, in order to gain more room for their rapidly-increasing business.

M. PASTEUR has succeeded in obtaining a grant from the French Government, which is to be used to assist poor persons living in France to reach his institute, in case they are in need of his treatment.

THE announcement of the discovery at Solingen of trichinæ in American pork, causes the *British Medical Journal* to remark that they are probably after all only political trichinæ, and related to the McKinley tariff.

CHOLERA IN CALCUTTA.—The deaths from cholera in Calcutta proper amounted to 963 in 1890, against 1,079 in 1889. During the last twenty-one years in which the town has had the benefit of the filtered water supply, only two years show a lower number of deaths from cholera than 1890.

—*Ind. Med. Gazette.*

THE percentage of deaths from enteric fever among the soldiers in India is five times as great during the first two years of foreign service as between the sixth and tenth years. The incidence of the disease at the earlier period is attributed to the influence of climate upon young, unseasoned men, every detachment of new arrivals being followed by an outbreak.

—*Med. Press and Circ.*

A FRENCH physician recommends vaccinating with steel pens, since one could easily afford to use a fresh one each time, and thus avoid danger of infection from the lancet. We think, however, that any one who would take the trouble to make use of a fresh steel pen at each vaccination would be one of the men who give the slight attention necessary to keep their lancet clean.

HUMOR, says Dr. Holmes, is a very good thing in a sick-room. It is much better to carry a cheerful air and excite a mild spasm of the diaphragm in the patient than to appear like an undertaker. But while humor is a good thing, and, as has been aptly said, "laughs with you," wit is an edged instrument, not to be used in the sick-room, for wit, unlike humor, "laughs at you."

THE LEPER PRIEST OF SURINAM.—Father John Bakker, who, like Father Damien, had devoted himself to the service of lepers, recently died of leprosy contracted in the course of his ministrations. He was a priest of the Order of Redemptorists, and for twenty years had labored among the lepers of Dutch Guinea, or Surinam, who are said to number about 3,000. For the last six years of his life he resided in the Batavia leper colony, a voluntary outcast from the society of his healthy fellow-men. Father Bakker, who was a native of Amsterdam, was fifty-eight years of age when he died.—*Brit. Med. Jour.*

A CELEBRATED German physician was once called upon to treat an aristocratic lady, the sole cause of whose complaint was high living and lack of exercise. But it would never do to tell her so, so his medical advice ran thus: "Arise at 5 o'clock, take a walk in the park for one hour, then drink a glass of tea, then walk another hour, and take a cup of chocolate. Take breakfast at 8."

Her condition improved visibly, until one fine morning the carriage of the baroness was seen to approach the physician's residence at lightning speed. The patient dashed up to the doctor's office, and on his appearing on the scene she breathed out: "Oh, doctor, I took the chocolate first."

"Then drive home as fast as you can," ejaculated the astute disciple of Esculap, "and inject the tea with a syringe, for the tea must be at the bottom."

The spell was not broken.

WHERE shall the new or dissatisfied medical men go? Even the antipodes are full. The editor of the *Australasian Medical Gazette* warns the world that Australia is overstocked with doctors, asserting, indeed, that the proportion of doctors to population is probably greater than in England.

MANY of the greatest names the world has known during the last thirty years appear among the thousands of testimonials that Lorenzo Reich has in praise of his Tokayer ausbruch wine. Dr. Oliver Wendell Holmes calls it "melted topazes squeezed from the grapes of Hungary." Says Henry Ward Beecher: "If I need a staff to lean upon surely I shall betake me to your famous Tokay."

DR. JOS. KIERNAN, in an article on Paretic Dementia and Life Insurance, rather contemptuously says that in the detection of this psychosis the average insurance company's physician is usually worthless. This may be true, but hardly needs such wording. Even specialists would probably not like to declare a positive diagnosis of this insidious malady in its early stages at one examination.

CREMATION.—It will interest cremationists to hear that the Japanese, who, some time ago, adopted burial of the dead, in imitation of European nations, have reverted to their own custom of burning the dead, on account of its sanitary recommendations. That the practice is in a fair way to gain favor in England appears from the unexpected measure of support given to it at the recent meeting of the British Medical Association. Sir William Moore went so far as to say that "Christian burial" was worse than the Parsi system of exposing bodies to the vultures. Several of the doctors went to what seems an extreme length in describing the insanitary effects of a graveyard on the neighborhood; and one case was cited from India where an outbreak of cholera had occurred through the digging up of an old cemetery in making a railway.—*Ind. Med. Gazette.*

WEEKLY Report of Interments in Philadelphia, from November 21 to November 28, 1891:

CAUSES OF DEATH.	Adults.		CAUSES OF DEATH.	Adults.	
	Adults.	Minors.		Adults.	Minors.
Abscess.....	2	1	Fever, scarlet.....	2	10
Aneurism.....	1		" typhoid.....	2	1
Anemia.....	1		Hernia.....	1	
Alcoholism.....	5		Inanition.....	1	3
Apoplexy.....	14		Influenza.....	1	
Asthma.....	3		Inflammation brain.....	4	11
Bright's disease.....	14		" bronchi.....	6	7
Burns and scalds.....	2	1	" kidneys.....	9	2
Cancer.....	9	2	" liver.....	1	
Casualties.....	9	2	" lungs.....	36	14
Congestion of the brain.....	9	3	" pericardium.....	1	1
" lungs.....	2	3	" peritoneum.....	2	
Cholera infantum.....	1		" pleura.....	2	
" morbus.....	1		" s. & bowels.....	6	5
Cirrhosis of the liver.....	3		Locomotor ataxia.....	1	
Consumption of the lungs.....	39	5	Marasmus.....	1	12
" " bowels.....	2		Neuralgia of the heart.....	1	
" " throat.....	1		Obstruction of the bowels.....	3	
Convulsions.....	15		Old age.....	16	
" puerperal.....	1		Paralysis.....	3	1
Croup.....	12		Rheumatism.....	2	
Cyanosis.....	12		Rupture.....	1	
Debility.....	2		Septicæmia.....	1	
Diabetes.....	1		Sore mouth.....	1	1
Diarrhœa.....	1		Softening of the brain.....	1	
Diphtheria.....	37		Syphilis.....	1	1
Disease of the heart.....	26		Shock, surgical.....	2	
Drowned.....	1		Tabes Mesenterica.....	1	
Dropsy.....	1		Teething.....	1	3
Effusion of the brain.....	1		Tumor.....	1	1
Epilepsy.....	1		Ulceration of the bowels.....	1	
Erysipelas.....	1		Uræmia.....	5	2
Fatty degeneration of the heart.....	4		Whooping cough.....	1	2
Fever, puerperal.....	1		Total.....	257	178

THE VOUDOU DOCTORS.—If an ignorant negro is smitten with a disease which he does not understand, he at once imagines that he has been tricked, and his first impulse is to consult one of these charlatans. No one who has ever been much among the Southern negroes can doubt the power of mind over matter. Only convince one of them that he is "conjured," and, unless a counter-spell can be wrought, his death is certain, a slow wasting away until the patient dies from what modern science knows as heart-failure—sheer weakness. There are limits to the power of the charm. The waters of a spring, the fruit of a tree may be hoodooed for one person alone, and a hoodoo buried under a door-step may paralyze the intended victim while every one else passes to and fro over it in perfect safety. I remember, when a child, being requested to pick up a queer conglomeration of feathers from beneath the door-sill of a cabin and put it into the fire. "'Twon't hurt you none, honey, but 'twill kill me ef I teches it.'" And the speaker spoke in good faith, believing fully what she said.

An old man over eighty, on the same plantation, took up the idea that the waters of the well from which the household drew its supplies were tricked for him alone, and ever day went half a mile and back to a stream of running water. When he grew too feeble for the journey he would trust the commission to no one but his young master, who, humoring the old fellow's whim, performed it faithfully. Yet on every other subject the old man's mind was clear to the last, and he died in possession of all his faculties, except that of hearing.

Only the other day a friend of the writer heard her chambermaid remonstrating with the nurse for having her picture taken. "I wouldn't do it for anything, 'thout 'twas a tin-type; I might risk that," she said. "But a photograph—or, nor! why, anybody could get one of 'em, and bring bad luck on you; all they need is a picture of you for the spell." Yet the girl in question claimed to have been through the grammar school, and was a bright and shining light in a literary society, which met weekly for purposes of "culchaw."

The knowledge which some of these conjurers possess of the properties of every herb and tree of field and forest is positively uncanny. They have a tea or ointment for every ill that flesh is heir to, and some of them would make the fortune of any dealer in patent medicines. Their skill in poisons is something fearful, and baffles the most expert practitioner.—From "Negro Superstitions," by Sara M. Handy, in December *Lippincott's*.

ELECTRICITY AT THE WORLD'S FAIR—THE TELEPHONE PATENT SITUATION, BY AN AUTHORITY.—Progress is the constant cry in electrical circles. No science has advanced as rapidly in practical results as the science of electricity during the past decade. A careful estimate made by the *Electrical Review*, New York, shows upwards of \$700,000,000 invested in this industry in this country. The same journal predicts that, if full opportunity is given, the most interesting and wonderful exhibit at the World's Columbian Exposition will be that illustrating the power and development of electricity. The *Electrical Review*, which has for over ten years been in the front rank of scientific journals, signalizes the beginning of its twentieth volume by a pronounced change in its title page, presenting an attractive and appropriate head-piece.

The following editorial review of the telephone situation, which is attracting more and more attention as the time approaches for the basic patent to expire, appears in the current issue of the *Electrical Review*:

"The fundamental telephone patent will expire in 1893, when the simple method of transmission by magneto currents will be open to the public. The practice of extending the term of patents is one which has fallen into desuetude, and nothing is more improbable than it would be revived in a case like the telephone. The inventor of the telephone has been enriched for his gift to the public, and deservedly so. With this fact established, the chances of extension fall. It must be remembered, however, that the telephone industry of to-day has only attained its present degree of perfection by the coalition of many improvements upon Bell's basic idea. There are hundreds of patented inventions which have been acquired by purchase, which will insure the Bell Telephone Company a firm grip on the business for many years after the fundamental patents expire. First in importance are the microphone patents and the induction coil for raising the tension of feeble microphone currents; and, secondarily, numerous switches, switchboards and systems which enable the present company to give good service. A competing company can only offer the public magneto transmission minus these improvements, which, of course, will give only inferior results. The bitter tone which characterizes most of the discussions of this subject is unwarranted, and proceeds from a misapprehension of the true position of inventors toward the public. Patent statutes are not merely a benediction of Congress on a deserving class of citizens; they are based upon the theory that the public gets a full *quid pro quo*. In order to stimulate progress in the arts an inventor is offered protection of the results of his genius for a period of seventeen years, on condition that he discloses to the public the secret of his invention. The public is the gainer oftener than the inventor, for it frequently happens that an inventor is years ahead of the age, and after securing his patent finds that the times are not ripe for its adoption, so that it lies fallow and comes into use only after the period of protection has expired. In the telephone case, however, the invention at once sprung into general use. Much of this was due to the importance of the invention and much to the energy of the promoters. It is proper that both should have met with financial prosperity. Mr. Bell's success has inspired with enthusiasm thousands of inventors whose efforts have enriched the public. The inventor, as a rule, is poorly rewarded; there are a few cases of distinguished success, and we all hear of them; but of the four hundred and odd thousand who have taken out patents, who knows how many have scored failures? Let us rather congratulate those who do succeed than begrudge them an equivalent for services rendered."

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CLINICAL CONTRIBUTIONS TO BRAIN SURGERY¹

Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Professor of Surgery in the Woman's Medical College of Pennsylvania.

are not now removing brain centers and tunnelling the brain in search of abscesses and tumors in quite as enthusiastic a manner as they were a couple of years ago. That such lesions should be promptly attacked surgically is unquestioned ; but this should be done only after a thorough survey of the conditions, and a judicial estimate of the gain that will possibly arise. The experimental character of many operations upon the brain in recent years has been almost as patent as in vivisectional operations done with an avowed experimental purpose. Death on the operating table and unsuccessful operations have at length begun to stay the hands of these over-enthusiastic surgeons ; and there is now ground for hope that cerebral surgery will, ere long, become less reckless.

My personal opinions are very much what they were in 1885; indeed, the advances in diagnosis and the improvement in operative methods have made me even more sure of the correctness of the conclusions then advanced. I cannot, however, bring myself to approve of the reckless way in which human life is often threatened by operations which hold out scarcely a ray of hope to the helpless patient. The rapidity of healing in aseptic wounds, and the tolerance of the brain under operative attack, do not justify hasty resort to intra-cranial surgery simply because the patient or his family are submissive under the persuasive eloquence of the would-be operator.

I desire, to-night, to report a few cases which have a practical bearing on some of the fundamental principles of cerebral surgery, and I hope they will serve as a means of bringing out the views of others in this interesting field.

CASE I. *Trephining for Cortical Epilepsy Apparently the Result of Traumatism; Improvement, Followed by Death in Five Weeks.*—A child twenty-nine

¹ Read at the meeting of the Philadelphia County Medical Society, November 25, 1891. For discussion, see page 511.

² "The Field and Limitation of the Operative Surgery of the Human Brain," *Annals of Surgery*, July and August, 1885.

months old had, sixteen months previously, received a fall, and, on the second day after the accident, was seized with convulsions. Four months before he had been struck on the head by a falling clock; but no special symptoms followed this mishap. Since the second attack he had had spasmodic seizures occurring at frequent intervals nearly every day. He dragged the left leg a little; did not seem bright, and was still unable to talk. There was a slight tendency to draw up the mouth on the left side, and also an inclination to turn the head and body to the left. When his attention was directed to bright objects he would apparently try to look at them, but his eyes usually turned to the left. His hearing seemed to be dull; but, so far as could be determined, the cutaneous sensibility was unimpaired. No changes were found by ophthalmoscopic examination.

Dr. Charles K. Mills, who referred the patient to me, placed the child under observation in order to detect, if possible, the exact character of the spasms. He was watched carefully in several seizures. Usually he squealed at the beginning of the paroxysm, and his face had a vacant look. The spasm began with a lifting movement of the entire body, as if with the muscles of the trunk, much like a sudden effort to rise from a recumbent to a sitting position. About the same time, as nearly as could be judged, the eyes and head turned to the left. The eyes did not keep to the left, but oscillated with the jerking movements of the body; the head, however, continually turned to the left. The left leg and arm were spastic in slight flexion, and were lifted up and projected outward and forward. The limbs on the right side were flaccid, but were projected forward and upward with the jerking movements apparently communicated from the trunk and the left limbs.

Another description of the attacks records that the child awakened suddenly from sleep with a toss of the body, as if badly frightened, with the head and eyes at once turning to the left. The left arm was extended forward and upward, stiff and rigid, with the thumb and little finger pointing backward, the other fingers being slightly flexed. Both legs were also tossed upward in the air, the left more projected than the right. His body was lifted up and down during the attacks.

It was difficult to determine any signal symptom or serial order of movements. The spasm was both tonic and clonic, and certainly most marked in the limbs and face of the left side. The movements of the leg and arm were those of projecting and protraction, and were rather movements from the shoulder and hip than from and in the distal portions of the limbs. The movements of the head, trunk, face, and limbs were often nearly coincident, but the conjugation of the head and eyes seemed certainly to be most commonly the initial movement.

The above description is taken from a former report of the case.¹

Dr. Mills thought that the symptoms seemed to point to a lesion of the area for conjugate deviation of the head and eyes, and certain associated movements of the trunk, thigh and arm. It was, therefore determined to trephine over the posterior portions of the first and second frontal convolutions.

After encircling the head with a rubber bandage to prevent hemorrhage from the scalp, I made an opening with an inch and a half trephine placed one and a quarter inches in front of the fissure of Rolando, and

a little to the right of the median line. Behind and below the opening so made, I cut out another button of bone with a one and a quarter inch trephine. The spurs of bone between the two holes were cut away with forceps. One point of the dura was abnormal in thickness and rather more adherent than normal. This condition did not seem to be caused by a Pachionian body.

A flap of the dura was raised. The pia-mater was very oedematous so that it could be pitted with the finger. A thin, yellowish-white membrane was found lying loosely upon the pia-arachnoid and had probably separated from the dura when the flap of that membrane was raised. This abnormal membrane was removed. Small electrodes applied to the convolutions failed to induce contraction of the left arm. This electrical test was repeated but failed to give results, though no antiseptic solution had come in contact with the brain tissue before the electrodes were used. Incisions in the pia allowed the serum, which caused the oedema, to escape. When the convolutions were thus clearly exposed there was no evidence of change in their structure or of any subjacent lesion. The dural flap was then sutured in position, and the portions of bone, which had been kept in antiseptic solution at a temperature of 105°, were replaced. Some catgut threads were laid beneath the buttons of bone and carried through the incisions in the scalp to give drainage.

The child was under my observation for nineteen days, during which time there were only three epileptiform attacks, and these were within two or three days after the operation. They were all slight and would scarcely have been recognized as pathological symptoms if the previous severe attacks had not formed part of the clinical history. A large amount of cerebro-spinal fluid escaped for several days through the opening left by the catgut drain, which was removed a day or two after the operation, and also through a small hole in the line of incision which had not healed by first intention as had the rest of the wound.

Bromide of potassium, calomel, and small amounts of alcoholic stimulants were given to the child during the after-treatment.

When he was discharged from under my immediate care his general condition was good, temperature normal, and there had been no escape of cerebro-spinal fluid for three days. The two small openings in the scalp were covered with small crusts.

Two weeks later the child died, but the history of the intervening period is unknown. I heard only indirectly of his death. No post-mortem examination was made, but indefinite information has come to my knowledge, which leads me to believe that suppuration under the scalp occurred.

This case is one of a class in which there is a great temptation to operate in hope of finding some removable lesion of the cortical centers. The findings are usually negative; and the results only temporarily satisfactory, even when the patient entirely recovers from the lesions incident to the operation. Unless the localizing symptoms and signs are more definite than in this instance, I think that in similar cases I shall hereafter be almost inclined to avoid operative interference. This provisional conclusion has been reached by a consideration of cases in the treatment of which I have been concerned, or with whose results I am familiar.

CASE II. *Traumatic Epilepsy Resulting from Unsuspected Fracture; Trephining with Discovery of an Irregular Protection of Bone on the Interior of the Cranium.*—A man, J. H., aged thirty-four years,

¹ Polyclinic, April, 1889, p, 299.

while working as a puddler, about eight years ago, received an injury on the left side of the head by being caught between an iron lever of a furnace-door and a brick wall. He was treated by no physician, and only lost about two days from his work, although the injured region was poulticed by him, and was the seat of a discharge for four or five months. No portion of bone came from the wound, and there were no special symptoms.

Several years ago he had venereal sores upon the penis, but no suppurating inguinal glands or syphilitic developments. Chills and fever, several years ago, constituted the only illness from which he suffered.

An examination of his head, after shaving, revealed several insignificant scars, and just above the zygoma on the left side, a half inch in front of the auricle, a depressed cicatrix sufficiently deep to hold the tip of the little finger. This was the scar left by the injury received eight or nine years ago. The cicatrix involved the temporal muscle, as was seen by the dragging of the skin over the scar during mastication. There was no evidence of depression of the skull in any other part of the cranium, and this depression did not seem to involve the underlying bone. His intelligence was good; but the patient said that he did not remember as well as he could a few years ago, and that at times his eyesight was not good. He shows at times a little mental deterioration. An ophthalmoscopic examination of the eyes gave negative results.

The patient states that about two and a half years ago he had an epileptic fit after working in a hay field on a hot day, and that since that time he has had marked seizures about every six weeks, with lesser attacks more frequently. He has but one epileptic fit at a time, from which he rapidly recovers, and is soon able to walk about. After such attacks he feels weak for some time. For several years he has had severe headache, not confined to any one portion of the head, and just before the epileptic seizure he feels a jerking sensation on the right side of the nose. He complains that his general health has deteriorated, but there is no apparent loss of flesh.

On the 26th of September of the present year (1891) I turned up a large flap of the scalp and found, after cutting through the temporal muscle, a depression in the skull one inch in length and three-eighths of an inch in width. This fracture was a surprise to me because of the history of the case and the situation of the injury over the thick belly of the temporal muscle. A three-quarter inch aseptic trephine was applied above and behind the depression. This cut through the bone with some difficulty, because the upper portion of the disk was much thicker than the lower part. Unfortunately my segment trephine had been forgotten, or this part of the operation could have been more expeditiously performed. Thinking I had cut entirely through the skull, I endeavored to pry out the disk, but removed simply the outer table of the button; I found that between it and the internal surface there was a portion of fibrous tissue entangled. It was probably this portion of tissue entangled in the bony cicatrix as a result of the fracture at the time of the injury that enabled me to lift out so readily the upper surface of the bony disk. The entangled tissue was doubtless pericranium. Removal of the interior table of the disk revealed below and in front of the opening a teat-like elevation projecting from the lower surface of the skull and pressing upon the dura. This elevation was about one-fourth of an inch higher than the general surface of the interior table,

and was the apex of an irregular elevation due to consolidation of a number of comminuted fragments of the inner table. The irregular lines of fracture, with the fragments displaced in varying degrees, are shown on the button removed and the rest of the bone subsequently cut out with gnawing forceps.

The specimen shows this condition very satisfactorily, though somewhat mutilated by the gnawing forceps with which the adjacent bone was removed after the original button was taken out. The depth of the skull wound and the thickness of the temporal muscle made it rather difficult to operate neatly, and my desire to get rid of the portion of bone pressing upon the dura, without prolonging the operation or increasing its severity, caused me to sacrifice the specimen in the interest of the patient. The dura was not opened, threads of catgut were used for drainage and a dry sublimate dressing was applied.

The following day the wound was found to be healing by first intention, and the drainage threads were removed. Bromide of potassium and chloral were given for two nights; and then twenty grains of bromide of potassium three times a day were ordered as a continuous treatment.

On the third day after the operation the patient had a sensation of twitching at the side of the nose similar to that which formerly preceded the epileptic seizures; but he had no fit. The wound healed by first intention, the temperature never rose above 99.6, and on the eleventh day after the operation the patient was sent to his home in the center of the State. He felt exceedingly well after the operation and expressed his satisfaction at the improvement of his condition. I suggested that the bromide treatment be continued by his physician, Dr. J. P. McCleery, under the idea that removal of the surgical cause of epilepsy should be looked upon as only a part of the treatment. I believe that in all such cases internal treatment should be combined with surgical procedures, and that the epileptic habit should be controlled by a prolonged course of bromides after the mechanical cause has been removed.

Seven and a half weeks after operation his physician reported that he had suffered no return of his epilepsy and was about to return to work. As far as it goes this statement is gratifying, but much more time must elapse before we can feel sure of a cure having been effected. The lesion is certainly one of those in which trephining ought to be eminently beneficial. Punctured fracture such as this should always be subjected to immediate trephining at the time of injury.

Upon this card is a representation of the external and internal appearance of the skull in a case trephined by me some years ago. There was a small scalp wound through which I could with my fingertip feel what I thought was rough bone. I found by incision that the roughness was due to an unusually irregular lambdoidal suture with Wormian bones; and that the only bony lesion caused by the blow received from the pitcher, with which the patient was struck, was a small dent looking like the opening for the entrance of a vein. The character of the vulnerating force, however, induced me to trephine. The removal of the trephine button and the insertion of a probe between the dura and the cranium discovered nothing except a small fissure on the inner surface of the disc. Death occurred within a short time from alcoholic delirium; and the autopsy revealed a T-shaped fracture of the inner table with a shelf-like detachment of quite an area of bone. If this patient had lived he would probably have had secondary

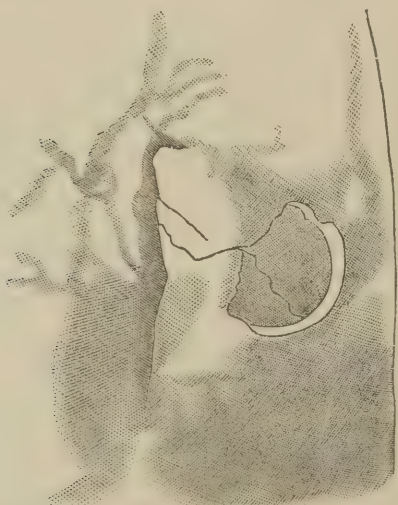
epilepsy, as occurred in the case just reported. The urgent necessity of primary trephining in such punctured fractures, even when no symptoms are present, is fully illustrated by these cases. The many deaths from cerebral abscess and other inflammatory processes, following the receipt of punctured fracture of the cranium, long ago justified the surgical conclusion that trephining in such injuries should not be delayed until the advent of symptoms of encephalic inflammation. The epilepsies resulting in cases which have escaped the immediate dangers of encephalitis add another argument to the wisdom of immediate operation in punctured fractures.

FIG. 1.



Outer surface of fractured cranium showing lambdoidal suture, point where trephine was applied, and small indentation looking like entrance of a vein made by the blow.

FIG. 2.



Inner surface of fractured cranium, showing cut made by trephine, and large area of inner table driven inward under the small external indentation. The trephine has not cut entirely through the bone where the inner table is driven inward.

CASE III.—Second Trephining for Traumatic Epilepsy; Death from Aseptic Cerebral Inflammation.—In June, 1891, I operated upon a man, J. T., aged twenty-eight, with the following history:

While working in a mine he had been struck upon the head with a huge mass of coal and rendered senseless. The attending physician, Dr. James D. Garvey, found a fracture of the skull, and upon the day of the

injury removed a portion of the bone. According to the patient's statement he recognized no one for four-teen days, and was, therefore, probably unconscious during that time.

After consciousness returned his left arm was paralyzed, but gradually regained power. Eight months afterward he had an epileptic seizure, and has had epileptic paroxysms at irregular intervals ever since. He is aware of the approach of a convulsion by nausea, dizziness, and disorder of vision. Occasionally he has time, after the premonitory symptoms, to sit down before the fit occurs. He thinks that he ordinarily falls in the convulsion, but he does not bite his tongue at such times, though he froths at the mouth and grinds his teeth. The attacks have occurred as often as one or two in a day, but he has gone as long as four months without a paroxysm. The ophthalmoscopic examination reveals a normal fundus, clear media, and hyperopic refraction. He is unable to say in what part of the body the muscular spasm begins.

A large triangular depression is seen upon the right side of the head, the upper margin or base of which is one and three-quarter inches to the right of the median line and almost parallel to it. The apex of the triangle points downward and forward toward the ear. The anterior margin of the depression is near or a little behind the fissure of Rolando, and the center of the depression is over the superior parietal convolution, or in that vicinity. The deepest portion of the depression is that near the middle line of the skull, at which part its depth is fully a half inch; the edge of the depression at this point is almost vertical. The inferior and posterior borders are less abrupt. The angle, which I have called the apex of the depressed triangle, is about two inches above the ear, and a little behind a vertical line drawn upward from the ear. The margins of the depressed area form an equilateral triangle, each side of which is about one and one-quarter inches in length. There are a number of other scars on the head, one or two of which radiate from this depression. There is distinct weakness of the grasp of the left hand, but no marked difference in size of the hand or the arm. The patient complains of the left hand feeling different from the right. There is no muscular contracture and no apparent change in the electrical reaction or in mensuration.

On account of the epileptic attacks in this case I determined to operate and remove any apparent cause of irritation. If nothing abnormal was found, I intended to remove the cicatricial tissue in the bony gap, and also the bony margin of the opening in the skull. Accordingly I made an elliptical flap in the scalp, which disclosed a triangular depression in the skull corresponding with the indentation seen externally. This was filled in with fibrous tissue, which I dissected out of the bottom of the depression. The bone was so thick that the gnawing forceps could not cut away the edges; hence, I used an aseptic trephine, and removed a disc one inch in diameter from one corner. Subsequently I made four small holes along the edge of the depression with a half-inch trephine, and then was able to gnaw away the edges with gnawing forceps. The soft tissues were yellow, and pigmented in places with particles of carbon, evidently due to coal dust ground into the wound at the time of the accident.

Before the operation pressure upon the scalp gave the sensation of a small cavity filled with air under the integument. It resembled the sensation experienced when a varicose vein is palpated. Removal of

the skin over the gap in the cranium did not alter this tactile phenomenon. The yellow pigmented tissue, found as above mentioned, was not brain tissue; and when cut through disclosed what looked like the interior of an emptied cyst, because the inner surface of the tissue had a smooth, glistening surface. No fluid escaped or had escaped by puncture. After having dissected away a considerable portion of this material, and having removed the edges of bone along the entire circumference of the bony opening I reached normal brain-tissue. Hemorrhage from the cerebral wound and from the periosteum was profuse. It seemed impossible to stop that which came from the brain and its membranes, which were fused together in an almost indistinguishable mass at the bottom of the deep hole. The triangular opening in the skull measured about two inches along each margin. The pulse became very feeble, counting 165 a minute. Prolongation of etherization and operation seemed unwise.

After unsuccessful attempts to stop the bleeding by ordinary methods, I concluded to grasp all the bleeding points with hemostatic forceps, which should be left in the wound. This was done, and five forceps left in the wound with their handles protruding. Iodoform powder was dusted upon the surface of the exposed brain, and strips of iodoform gauze packed into the cavity. A few sutures were applied after the flap had been replaced; the gauze strips and hemostatic forceps projected from one corner of the wound. A voluminous dressing of iodoform gauze and cotton was then applied and the patient put to bed. Seven and one-half hours after the operation the dressings were saturated with bloody serum, and, therefore, in order to avoid sepsis, I determined to reapply them and remove the hemostatic forceps at the same time. This was done carefully, the gauze withdrawn, and the wound redressed with a dry antiseptic dressing. In drawing out the strips of gauze a little oozing of blood occurred, but this hemorrhage I did not think of sufficient importance to prevent my closing the whole wound with sutures and without drainage.

The next morning the patient showed great restlessness, but was in a condition of hebetude. He, however, made his wishes known when he desired to urinate. Bromide and chloral were given to control the restlessness.

On the second day respiration varied from 25 to 40 in a minute, and the temperature was 101°. During the day the patient's condition was fairly good, though he was difficult to control on account of his restlessness and irritation. The urine was passed unconsciously. A turpentine enema was given; bromide and chloral were continued. On the third day after the operation it was necessary to give the patient $\frac{1}{8}$ of a grain of morphine hypodermatically, and to strap him in bed because of his tossing from side to side. During the day he became hoarse, and I discovered at the base of the right lung harsh râles, probably bronchitic. The temperature was now 101.6°, while his respiration was between 35 and 40.

On the fourth day after the operation the note is made that he slept after a hypodermic of morphine— $\frac{3}{8}$ of a grain—and is quieter. Respiration, 40 to 45. His breathing, however, was embarrassed and harsh, somewhat of the Cheyne-Stokes' type. At 7 P. M. respiration was 50; temperature 102°. The wound had been left undisturbed since the evening of the operation when the hemostatic forceps were removed. The rise in temperature and the patient's restlessness made me fear that there had been something

amiss in my antiseptic precautions. I therefore determined to inspect the wound. Upon removing the dressing I found the flap bulging, and detected a feeling of fluctuation when my finger was put upon it. I expected to find pus under the flap, although the wound had healed by first intention. I tore open the union, but no evidence of pus existed; a soft, aseptic clot of blood, however, lay under the flap. I removed the clot and explored the cranial cavity through the operation wound with my finger in search for pus. The cerebral tissue was disintegrated and soft, but no purulent collection was found. I moved my finger in various directions in the pultaceous mass, and finally, when my little finger was buried its entire length, came upon a hard mass at the bottom. This, I presume, was one of the great ganglia. The tissue overlying this part was almost fluid. There was no odor of decomposition, nor evidence of pus. At the time of this exploration the patient was moribund, and I felt fully justified in these radical measures. Unless I found pus he was sure to die.

The dressings were re-applied; hypodermic injections of strychnine were given. Respiration gradually failed, and the patient died the next morning, which was the fifth day after the operation.

It seems hardly possible that the fatal symptoms were due to pressure from such a small amount of hemorrhage under the flap, since there was much space by reason of so much bone having been cut away; and, moreover, the blood, if causing tension, would probably have readily escaped before the wound had united. I concluded, therefore, that death occurred from aseptic cerebral inflammation leading to disintegration and softening of the brain tissue. The pulmonary symptoms may have been secondary; or he may have had a congestion, preliminary to an acute pneumonia, acting as a prominent feature in the fatal result. Rapid respiration was certainly an early symptom.

The case is to me exceedingly instructive, because the indications for operation were clear, and because death occurred notwithstanding what seemed to be perfect aseptic conditions of the wound, during its entire course. It is a good illustration of the fact that modern surgery has not rendered serious operations entirely devoid of dangers. The diminution of the death-rate in operations has been great in recent years, but certainty of recovery is by no means as absolute as some reporters of operations would have us believe.

The next case is reported because of the youth of the patient.

CASE IV. *Trephining for Depressed Fracture of the Skull in an Infant Seven Months of Age; Recovery.*—

A mother, while carrying her seven months' old child along a railroad track, fainted, or had epileptic seizure, and fell, dropping the child. When she regained consciousness the baby was whining and fretting a little, but did not seem badly hurt. After the mother reached home and removed the child's wraps, she discovered a large indentation of the skull on the right side of the head, which she supposed was due to the child's head having struck against a railroad tie, or upon the iron track. The baby did not have any symptoms of brain implication.

When seen by me on the next morning the infant was perfectly comfortable; had slept well all night; played as usual, and had a good appetite. The mother believed the depression to be less marked than when the accident occurred. Examination revealed an irregular depression in the parietal and

occipital region on the left side of the head. The lower extremity of the vertical diameter of this depression was about 2 centimeters above and 5 centimeters back of the top of the ear. The depression extended upward 6 centimeters. The horizontal diameter—that is, that parallel to the sagittal suture—began at a point near the anterior portion of the posterior half of the parietal bone, and extended backward 6 centimeters, very nearly bisecting the vertical diameter. The depression at its deepest portion was fully a centimeter below the surface of the skull.

At this time the patient's temperature was normal; pulse 120. During the night 2 grains of sodium bromide were given because of slight restlessness. The bowels were opened by a soap suppository.

On the second day after the accident I found the child feeling well and the depression less marked than on the previous day, when I made the first examination. I felt unwilling, however, to let the injury go without surgical treatment, and therefore determined to make at least an exploratory incision, because the injury had been so severe as to make a very deep depression. The possibility of secondary symptoms, such as epilepsy or impaired intellect, seemed to me to indicate this slight operative interference.

An Esmarch's bandage was carried around the head before the incision was made, to prevent bleeding. A horseshoe flap was then dissected up at the point of injury. The bone was markedly depressed, showing a condition similar to green-stick fracture. I thought I could cut through the cranium with a strong knife, but found it necessary to use a trephine. A small trephine opening was made through very thin bone at the anterior edge of the depression, and the portion pushed down upon the brain easily elevated with the end of a grooved director. A few bleeding arteries were twisted, and the edge of the scalp wound drawn together by catgut sutures. Boric acid powder and dry sublimate dressing were applied.

The patient reacted from ether promptly, and went quietly to sleep. Two-grain doses of sodium bromide were given at intervals until 10 grains had been taken. The patient was restless through the night, but a few drops of paragoric quieted him. The bowels were kept open by injections of oil.

The temperature, the day after the operation, reached 101.8° ; but soon all symptoms of fever disappeared, and on the seventh day the dressings were removed. The wound was found to have healed by first intention without suppuration.

At the end of the sixteenth day the patient was sent to his home in New Jersey entirely recovered.

In this case the accentuated character of the depression was the factor which led me to adopt operative procedures, although I know the tendency for depression of the skull in healthy infants to correct itself spontaneously.

About eighteen months ago, I saw a child who had received, during birth, a very marked indentation of the skull, because the head had become locked on the promontory of the sacrum during delivery. The depression was situated on the left side of the head, and included portions of the frontal and parietal bones near the anterior fontanelle. It was about two and a half inches long and quite deep. The case was one of difficult labor, requiring forceps at the hands of Dr. Anna M. Fullerton, and the child, when born, was in the first degree of asphyxia, requiring the warm bath and artificial respiration. The child had

frequent convulsions, beginning twenty-four hours after birth, evidently due to implication of the brain; yet I declined to operate because I thought that the indentation was probably not associated with actual fracture of the soft bone. The convulsions ceased within twenty-four hours, and although the patient was under observation for several weeks, I never could convince myself that operative procedures were justifiable. The depression gradually lessened, and when the child was last examined by me, seemed unimportant. The medicinal treatment of the child consisted of sodium bromide and potassium iodide. I have sometimes felt, in regard to this case, that the subsequent history might, perhaps, show that it would have been better to have interfered. I have not been able, thus far, to succeed in tracing the subsequent history of the little patient.

CASE V. *Specimens of Cerebral Tumor Which Could Have Been Readily Removed by Surgical Means.*

—The brain herewith presented shows a tumor occupying the parietal region, and was obtained from a subject in the dissecting-room of the Woman's Medical College of Pennsylvania. The history of the case is, therefore, exceedingly indefinite, though, through the courtesy of Dr. George S. Robinson, I have been able to obtain the following notes:

The patient was a woman, aged thirty-five years, of intemperate habits, who had, so far as known, no injury of the head and was not discovered to be syphilitic. She was an inmate of a public institution, and was sent to its infirmary about a week before her death, complaining of pain in the head which seemed to be somewhat relieved by pills of an anti-neuralgic character. The headaches continued, however, notwithstanding medication, and, for about two days, vomiting occurred. The patient then became comatose, and paralysis of the right arm and leg supervened. The pupils were somewhat dilated and did not respond to light. Respiration was slow and the face flushed. No convulsions occurred, but there was slight twitching of the facial muscles. The patient was not noticed to be blind or deaf. Death took place on the sixth day after admission to the infirmary.

An examination of the specimen shows a flat, circular tumor in the right parietal region lying between the dura mater and the cerebral hemisphere. The convolutions are pushed downward by the growth, but are not infiltrated in the least degree. The dura has not been preserved, but it is quite evident that the growth was attached to the inner surface of the dura, since its upper surface is torn and it has no attachments to the convolutions, but can be lifted out of its bed without disturbing their integrity. The tumor is almost circular when inspected from above, being 6 centimeters in the antero-posterior diameter, and 6.5 centimeters in the transverse diameter. It is flat from above downward, varying from 2 to 3 centimeters in thickness. It occupies the right parietal region upon the superior aspect of the cerebrum. Its anterior margin lies in a line with the callosomarginal fissure, and pushes forward the ascending parietal, or posterior central, convolution. The tumor extends backward to the parieto-occipital fissure, crowding downward and backward the first occipital convolution. It extends outward and downward to the posterior end of the parallel fissure, or the first temporo-sphenoidal fissure, pressing upon the angular gyrus. The first and second parietal convolutions are flattened, and lie underneath the tumor in the concavity made by its growth producing pressure downward. On the inner aspect of the hemisphere, the tumor presses the convolutions downward, being

nearly two centimeters thick where it lay in contact with the falx. The anterior edge of the tumor is about one centimeter further downward than the posterior edge of the corpus collosum. The gyrus fornicatus and the precuneus are pressed downward, but the cuneus does not appear to be pressed upon or displaced.

No surgeon can look upon this specimen without a feeling of regret that he could not have had an opportunity to attempt its removal. Its location immediately under the dura, its freedom from attachment to the cerebral convolutions and its moderate size would have made its removal easy. Its location behind the motor area is probably the reason that the patient's symptoms were not marked until just before the fatal termination of the disease. Her habits of life and surroundings were such that she would not

FIG. 3.

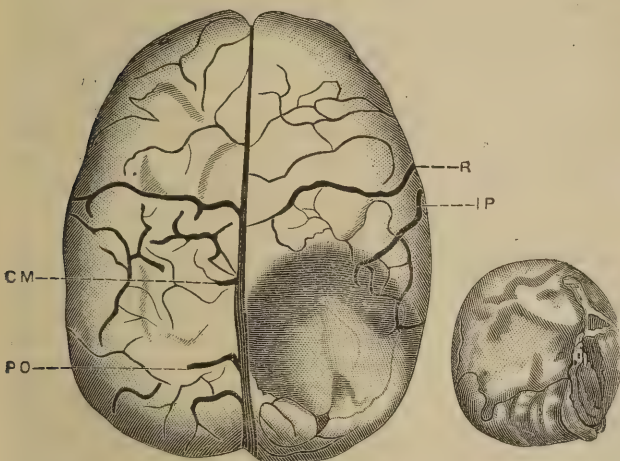


Diagram showing relations of brain tumor. R, fissure of Rolando; I P, inter-parietal fissure; P O, parieto-occipital fissure; C M, callosal-marginal fissure. The tumor has been lifted out of its bed.

be likely to call a physician's close attention to the early manifestations of cerebral disorder, if indeed these were apparent to the patient herself. A large opening made with trephine, gouge, or saw, followed by a similar incision of the dura would have enabled the operator to lift the tumor from its bed without hemorrhage or disturbance of the cerebral convolutions. The growth is probably a fibroma.

The occurrence of right-sided paralysis seems rather curious, but Dr. Robinson states that he is sure of the correctness of this note, for he remembers that she used her left hand during her final illness. There is no evidence of a second tumor on the left side. Possibly the growth may have so pressed against the falx as to have impeded the current in the superior longitudinal sinus, and thus have given rise to pressure on the left cortical centers near the upper end of the fissure of Rolando. Unfortunately, I did not see the specimen until after the dura and falx had been removed.

CASE VI. Probable Basal Cerebral Tumor in which Operation was Deemed Inadvisable.—In September, 1889, a man, aged thirty-four, was referred to me by Dr. H. C. Bloom, who had reached the conclusion that his patient was probably suffering with brain tumor. The history was somewhat difficult to obtain from the patient, who had evidently some impairment of mental faculties. In childhood he had otorrhœa in each side, and thought that his present ailments, of two or three years' duration, had succeeded a renewed discharge from the left ear. About a year be-

fore I saw him he had fallen insensible; but for a year and a half previously he had had attacks of severe pain in the head, to the left of the median line. Some failure of vision had been observed for eighteen months; occasionally he walks unsteadily, but there is no apparent loss of power in arms or legs. His family thought his mental traits had shown change for several years. He is now becoming fat, sleeps a good deal, and is somewhat "weak-minded" in his conversation and facial expression. There was no direct history of syphilis. Optic atrophy was found in both eyes; being more marked in the left, with which he could only see enough to count figures.

The vision of the left eye was $\frac{4}{LX}$. Examination

showed him to have lateral homonymous hemianopsia and Wernicke's pupillary reaction. The fields of vision indicated a left-sided lesion. No deviation of the eyes was determined, but he thinks he has at times had double vision. Both tympanic membranes were perforated. He had had no epileptic seizures, but, as above stated, had once fallen unconscious. The urine had a specific gravity of 1010 and contained neither albumin nor sugar. The grasp of the right hand was stronger than the left, accountable perhaps to his profession—that of a dentist. Thermometric examination for several days showed him to be free from fever.

No anæsthesia nor paresis could be determined. Dr. B. Alexander Randall's examination resulted in finding in the left ear an old cicatricial condition, with a mere trace of discharge. The original trouble had probably been present in childhood, and was now in abeyance; though occasional exacerbations had in all probability occurred. The right ear was in a state of chronic suppuration of the attic and adjacent cavities, with some likelihood of the existence of diseased bone. No involvement of receptive or central auditory apparatus was discovered by the use of tuning forks. The patient's symptoms were thoroughly studied for me by Drs. Charles K. Mills, H. C. Wood, Edward Jackson, B. A. Randall, and A. W. MacCoy.

From Dr. William Osler, who had seen the man some months before, I learned that then he had had an intense optic neuritis, but at that time no hemianopsia. Dr. Osler suspected a slowly growing neoplasm; probably located in an anterior location because of the early alteration in habits.

Dr. Mills was inclined to think that the symptoms shown when the patient came under my care pointed to a lesion between the optic chiasm and the primary optic centers. This he considered might be a tumor or abscess of the inner part of the temporal lobe, encroaching on the optic tract back of the chiasm; or a similar lesion of the cerebellum advancing and invading the more anterior structures.

Dr. Wood believed the localizing symptoms pointed to a lesion encroaching upon the corpora quadrigemina or optic chiasm, which was most probably either a localized meningeal inflammation with much exudation, due to diseased bone at the base of the skull, or a tumor there situated. He thought it possible that an abscess might exist in the temporal or frontal lobe, but there was little evidence to indicate this being a probability.

This case was one that offered a good many points of surgical interest; but, after determining that the lesion was probably basal and on the left side, I declined to operate, because there was no evidence of the left ear being a probable cause of intra-cranial suppuration. If the symptoms had pointed to a right-

sided lesion, the condition of the right ear would have influenced me strongly toward operative measures, looking to the evacuation of a temporal abscess. The association of chronic aural suppuration with cerebral abscess is so well known that I think I should have strongly inclined to exploratory trephining.

I accordingly declined to operate, and sent the patient home. I heard from him frequently, but he gradually lost vision and mental power. I had arranged for, and obtained permission for, an autopsy; but when he died the past summer no word was sent me. Previously to death he had violent pain in the head, a prolonged chill, several successive convulsions and coma with high temperature. These symptoms occurred suddenly and terminated fatally in four days. Before that time he thought his eyesight, which had been almost totally lost, was improving. The time he survived after my examination, nearly two years, leads me to believe that our abstinence from operation was correct; since the lesion was more probably a tumor than an abscess. If a tumor, its removal was certainly impossible.

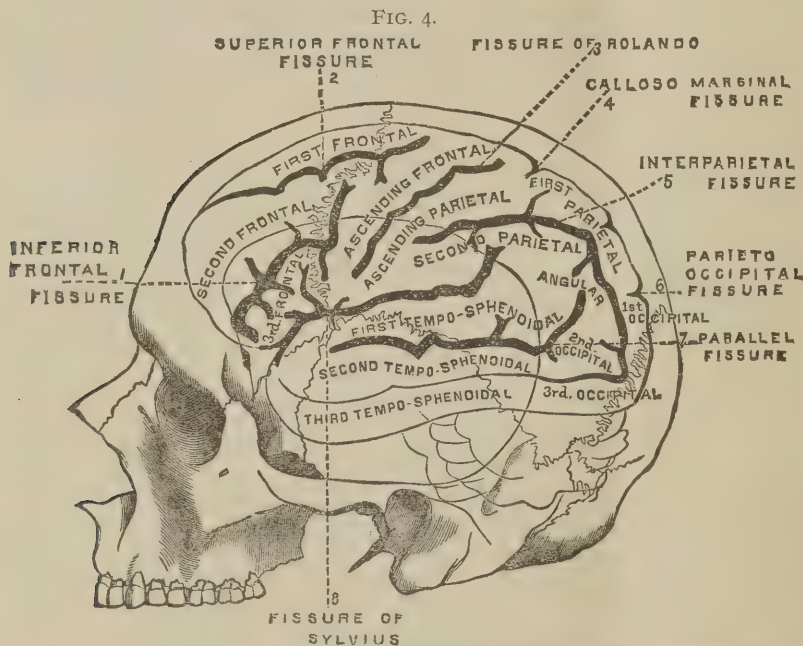


Diagram showing lateral view of the cerebral convolutions and fissures, to aid in making the description clear.

This case presents a picture different from the specimen before you, in which the tumor could have been lifted out so readily. I show a diagram of the cerebral convolutions, which may aid in following the description of these two cases of cerebral tumor.

I fully recognize that the record of these few cases has not been one of brilliant results. The death of some of the patients, and the short time between operation and this report in others, make the communication in some respects unsatisfactory. It has seemed to me, however, that there are elements of interest in the histories which will afford food for thought and open the way to discussion. It is for these reasons that I have been tempted to give these clinical histories, which are certainly not in any way remarkable.

THE best action of the famous 400 so far is the formation of a society for the distribution of Christmas candy and Christmas gifts. They could easily make many times 400 happy and yet not feel the gift.

MODIFIED JUNKER INHALER, WITH POINTS FOR DISCUSSION ON ETHER AND CHLOROFORM NARCOSIS.¹

By MARIE B. WERNER, M.D.

MY object in presenting this inhaler before the society to-night is not alone because I consider it the best of its kind ever brought to my notice, and, therefore, concluded it might be of interest to some of the members here to-night, but also to learn something about the pros and cons regarding the use of ether and chloroform as anæsthetics.

The inhaler has the respiration indicator approved of by the Hyderabad Chloroform Commission, and, in addition, has a graduated stop-cock which will, if properly adjusted, control the volume of air forced through the bottle containing the anæsthetic, thus giving a continuous current.

The bottle should be but partially filled—4 to 7 drachms—thus allowing the contents to pass over through the tube to the face-piece in the form of vapor. If chloroform is used, with one compression of the bulb 5.19 cubic inches of air are forced through the liquid, and will evaporate, in a temperature of 68° F., about 1 minim; a trifle more than one cubic inch of the vapor passes through the short tube into the face-piece.

The noteworthy points are that the patient does not inspire much, if any, of the expired air; the apparatus is clean, and can be kept so with little trouble; the quantity of the anæsthetic used is comparatively small; and last, but not least, perhaps, the character of the respiration is always indicated to the operator as well as the anæsthetizer.

The character of the respiration seems to be of vast importance, if we accept the report of the Hyderabad Commission, based upon an almost unbroken series of 45,000 cases of chloroform administration, extending over forty years, in which the anæsthetizers were guided entirely by the respiration, and there was not a death. In strict accordance with these clinical facts, the experimental data of the Hyderabad Commission prove—²

"1. That the administration of chloroform is free from risk if the breathing is perfectly regular throughout and the inhalation is stopped as soon as the animal is fully under its influence.

"2. That chloroform never causes death by sudden stoppage of the heart.

"3. That death from chloroform is always the result of an overdose.

"4. That the danger of overdosing is enormously increased by holding the breath, struggling, asphyxia, or anything which causes the patient or animal to take gasping inspirations.

"5. That the inhibitory action of the vagus nerve, which is called into play in threatened and actual poisoning with chloroform, is a safeguard."

¹ Read before the meeting of the Philadelphia County Medical Society, November 25, 1891. Discussion, page 512.

² *Lancet*, November 29, 1890.

I do not wish to give the impression that I advocate chloroform in all cases, but think many will admit that there are cases where it has advantages over ether, provided it can be given with safety to the patient. For instance, in cases of bronchorrhœa it is less stimulating to the mucous membrane; in certain pathological conditions of the kidneys it can be relied on with greater safety. Last, and perhaps not least, to be considered is the small quantity necessary for a large operation, thereby possibly obviating some of the unpleasant after-effects of ether, notably the nausea, vomiting, and depression which sometimes follow a prolonged operation.

There is one point I have not yet been able to develop, and that is the utility of this apparatus in giving ether. Although I have been assured it would behave satisfactorily, I have not had sufficient opportunities to demonstrate it with any degree of certainty to myself; but feel sure, however, if it could be utilized it would mean economy of ether and greater comfort to the patient.

This inhaler may be obtained from Messrs. Krohn & Senseman, London.

THE AMERICAN PHYSICIAN IN LITERATURE.¹

By E. L. B. GODFREY, A.M., M.D.

MR PRESIDENT AND GENTLEMEN OF THIS SOCIETY: The latter part of the eighteenth century witnessed the dawn of American literature. It first arose in the form of theological discussions, due to the enjoyment of religious liberty and the superior attainments of the clergy. The desire, however, for political freedom gave birth to the great oratorical speeches of our forefathers, which occupied the front rank in the literature of the early part of this century. Contemporaneous with these were the beginnings of American poetry, fiction and journalism, and, since then, such rapid progress has been made in all forms of literature that to-day America stands adorned with gems of thought whose brightness is undimmed in the presence of the richest treasures of the ages.

HISTORY.

No department of literature has been cultivated in this country with greater credit to authors than history. Untrammelled by political authority, the American historian has been free to connect the events of the past with those of the present and to impart to them his own convictions. Nor is this all. The diversity in sentiment of the different nationalities meeting on common ground; the necessity of urgent action in tilling the soil and providing for physical comforts; the dangers and adventures incident to border life; the liberty of speech and religion; the freedom of the press and the political opposition to the mother country, all tended to beget a people unsurpassed in their independence of thought and action and self-reliant powers. The very actors in American history have given inspiration to historic pens, and, in recounting their deeds, a narrative has been produced that reflects the greatest liberty and progress known to mankind.

If the works of our early historians seem crude, and tintured with an ancestral philosophy that we of this day will not acknowledge, the splendid scholarship of George Bancroft, Jared Sparks and

Benson J. Lossing has not only placed the rich data of the past upon an enduring literary basis, but has pictured for posterity acts of heroism and patriotism unparelled in the history of the world. To this rich display of historic learning, which Gibbon, Hume and Macaulay would have honored, the medical profession has contributed no small part. In the early period of the Revolution, there sprang from the loins of the medical profession a man whose work is still stamped with the seal of literary and historic approval. Dr. David Ramsey bears the honored title of the Historian of the Revolution. He was born in Lancaster, Pa., in 1749, and, after graduating at Princeton and in medicine, he entered upon the practice of his profession at Charleston, S. C. Of great professional and literary industry; an ardent patriot and a fluent orator, he early espoused the cause of his country, and such was his influence and force of character that he successfully opposed, amidst great opposition, the confiscation of the property of his neighboring loyalists. He entered the Continental army as surgeon and, in 1780, was captured and held with others as hostage by the British. He served as a member of the Continental Congress of which, in 1785, he was acting president. He wrote "A History of the Revolution," "A History of South Carolina," "A History of the United States" and a "Life of Washington."

Not less influential was Dr. Benjamin Rush, of Philadelphia. Of the highest professional and social position, Dr. Rush was not only a leader in his profession but also in politics. His prominence led to his election to Congress where he became distinguished as a fluent speaker and an ardent patriot. He served as surgeon-general of the middle division of the Continental army and was a close friend of Washington. Together with Drs. Walcott and Lyman Hall of Connecticut, he signed the Declaration of Independence, and was a member of the Pennsylvania convention that ratified the Federal Constitution. In medicine, Dr. Rush rose to the highest point of professional distinction. His polished manners, his classic attainments and his love for his profession caused his election to a professorship in the University of Pennsylvania, while his efforts in the yellow fever epidemic in 1793, where he was accredited with saving six thousand souls, have made him forever famous as a benefactor of mankind. Dr. Rush was one of the founders of the Philadelphia Dispensary and of Dickinson College. His contributions to medical literature were numerous, but his political essays and his public letters, his deeds in the field and his orations in Congress were the making of history.

I might further prolong the contributions of medical men to history, but the time assigned me will not permit. But there are some whose works are of such historic value that their names should not be omitted. Dr. Cadwallader Golden, of New York, wrote, in 1761, "The History of the Five Indian Nations"; Dr. Arthur Lee, of Virginia, famous as a Revolutionary leader and secret agent of the government abroad, composed the historic letters of "Junius Americanus"; Dr. James Thatcher, of New England, a surgeon of the Continental army, wrote "A History of Plymouth"; Dr. Isaac S. Mulford, a former member of this society, wrote "Civil and Political History of New Jersey"; Dr. Stephen Wickes, of Orange, N. J., wrote "The History of Medicine in New Jersey, and of the Medical Men from the Settlement of the Province to 1800"; Dr. John R. Stevenson, a member of this society, wrote "Medical His-

¹A speech delivered at the Semi-annual Banquet of the Camden County, N. J., Medical Society, November 10, 1891.

tory of Camden County"; Dr. Abram Clark, a "Medical History of Hudson County"; Dr. J. B. Somers, a "Medical History of Atlantic County"; Dr. John Blane, a "Medical History of Hunterdon County"; Dr. John S. Cook, with others, a "Medical History of Warren County"; Dr. Maurice Beesley, a "History of Cape May County"; Dr. Bateman, a "History of Cumberland County," and Dr. Forman, a "Medical History of Hunterdon County."

POETRY.

The first fruits of American poetry were Indian ballads and patriotic songs. These soon gave way to poems of graceful form and wider interests, culminating in the masterpieces of the most illustrious of American poets, William Cullen Bryant. More than any other, Bryant has consecrated by his poetic art the beauty of our land, the faith of our fathers and the spirit of our institutions. In this field, where the sympathetic Longfellow, the graceful Willis, the imaginative Drake, the psychological Dana, the patriotic Whittier, the descriptive Lowell, the fearless Whitman and the philosophical Bryant have set the standard for the nation, the medical profession has furnished several famous contributors.

Ranking among the first of American poets, both in point of time and precedence, is Dr. Oliver Wendell Holmes, of Boston. To him may be conceded the place of honor among living poetic writers, unless that be reserved for the beloved patriot, John G. Whittier, or our distinguished townsman Walt Whitman. What Washington Irving is to American *belles-lettres*, Fenimore Cooper to American fiction and George Bancroft to American history, Dr. Holmes is to American poetry. He is acknowledged to be the Alexander Pope of America, possessing the brilliant talents of the Englishman unmarred by his physical and mental defects. You are familiar with his poetry, his novels, his essays and his contributions to medical literature. In all of these departments, he has received high honors. His charming and unaffected style, his clear insight into character and his vivid delineations of New England scenes mark him as the most popular of living American writers. Omitting Dr. James G. Holland, of New York, and Dr. S. Weir Mitchell, of Philadelphia, of whom I shall speak later, I have no hesitation in saying that Dr. Abram Coles, of Newark, N. J., is, next to Dr. Holmes, the most distinguished poet that the medical profession has produced. His literary distinction and his wealth proved no inducement to him to relax his professional work, for which he manifested a strong affection. He received the degree of A. M. from Rutgers; Ph.D. from Bucknell, and LL.D. from Princeton. In 1865, when President of our State Medical Society, he delivered the annual address in poetry. The title of the poem was "The Microcosm," and in it he describes with classic dignity and sympathetic fervor the mission of the physician, and introduces as illustrations the famous paintings "Vesalius Engaged in Dissecting," "Harvey Demonstrating the Circulation of the Blood," and "Rembrandt's Lessons in Anatomy." No one can read this poem without a profound respect for the elegant diction, the familiarity with the classics and the touching love for the profession displayed by the author. Dr. Coles wrote many other poems, but his translations of Latin hymns and Hebrew psalms have made him the most famous of American translators.

It would require the entire time allowed me to recite the names and works of the poet-physicians of America. Yet gladly would I do this, for how grateful, how pleasing it is to know that in the medical profession, from among the men whose lives are spent under the dark shadows of pain and sorrow, there are found those who can push aside the solemn realities of life and break forth into joyous and poetic song. There are some names that cannot be omitted without doing injustice to the subject. Drs. Samuel George Morton, William Hunt, Caspar Morris, Thomas Wistar, John K. Mitchell, J. Aitken Meigs, and S. Solis-Cohen, of Philadelphia; Drs. James R. Orton, Benjamin Prime, and Samuel L. Mitchell, of New York; Dr. Jacob Bigelow, of Boston; Dr. M. N. Baskett, of Missoturi; Dr. Lemuel Hopkins of Hartford; Dr. James B. Coleman, of Trenton, and Dr. T. J. Duffield, of Orange, N. J., and many others are known as graceful poets and verse writers, and illustrate both the scholarship of the profession and the taste and spirit of the times.

FICTION.

Unlike poetry, the prose element of literature has predominated during the years of peace in our national existence. The first English novel was written by Samuel Richardson early in the eighteenth century. The first American novel was produced by Charles Brockden Brown, of Philadelphia, at the beginning of the nineteenth century. Since then there has been no lack of native fiction; indeed, this is the day of novels, and the result of this craving for fiction is to weaken thought and ideas and nourish the superficial in intellectual life. Romantic fiction in America reached its height in the novels of J. Fenimore Cooper and Nathaniel Hawthorne. The modern realistic school may be said to culminate in the productions of William Dean Howells. In this field of literature, which to day is more fully occupied than any other, except journalism, the medical profession has many distinguished representatives. Dr. Holmes is again a conspicuous figure. Dr. Robert Montgomery Bird, editor of the *United States Gazette*, about 1830, wrote a number of novels that rank with those of Gilmore Sims, Dana and Longfellow. Dr. William Mayo's novels met with extraordinary sale. But there are three names that stand conspicuous in the front rank of men of letters, which the medical profession may well be proud of. One has passed beyond the boundary line of mortality, but still lives in his writings, which are accorded a perennial popularity. I refer to Dr. J. G. Holland, editor of the *Springfield Republican* and of the first *Scribner's Monthly*. Dr. Holland was a novelist of high rank; a brilliant essayist; a poet both witty and wise, and a true friend to humanity. The other two are still in our midst and active in our profession—Dr. William A. Hammond, of New York, and Dr. S. Weir Mitchell, of Philadelphia. In the rôle of novelist Dr. Hammond has attained a widespread fame, and shows a high degree of literary skill. He possesses a clear and graceful style; a keen appreciation of nature's beauty and grandeur, and a natural talent for story-telling. His grasp of character is synthetic, and his methods are those of the late romantic school.

Dr. Mitchell, of whom Philadelphia has reason to be proud, possesses a most versatile genius. As a poet he has won high praise for the beauty and elegance of his verses; as a dramatist he has had the pleasure of witnessing the successful production of his play by a famous actor; as a novelist he has gained laurels that are unfading. He ranks as one

of the most powerful and skillful of fiction writers. He is a realist in the best sense of the word ; a keen analyst ; a master of plot and climax, and a close student of life in this complex nineteenth century. The novels of both Dr. Hammond and Dr. Mitchell reflect credit upon them and honor upon the profession of which they are illustrious members.

OTHER DEPARTMENTS IN LITERATURE.

There are still several departments of literature in which American genius has been nobly illustrated by American physicians. In biography, Drs. Charles Caldwell, Samuel D. Gross and J. M. DaCosta and others, have won lasting fame. In explorations, the works of Drs. Elisha Kent Kane and Isaac Israel Hayes have become standard authorities of reference. In magazine literature, Dr. Reynold Coates, a former member of this society, won a wide and brilliant reputation. He wrote "Leaflets of Memory" and "The Gambler's Wife," in addition to a work on physiology and medical practice, and was an intimate associate of N. P. Willis and Edgar Allen Poe. In politics, he also became distinguished, and, in 1852, was nominated for Vice-President on the Native American ticket, with Daniel Webster for President. In this department, the contributions of Drs. Henry Hartshorne and Horatio Wood, of Philadelphia ; Edward H. Clark and Henry T. Biglow, of Boston ; T. Gaillard Thomas, of New York ; John S. Billings, of the United States Army and Edward Stuppen of the Navy, and others, have made the medical profession famous.

And now I beg your indulgence while I briefly recite the work of a man for whom this society entertains a profound respect. I mean Dr. Ezra M. Hunt, of Trenton. Dr. Hunt has contributed to Biblical literature a work of two volumes known as "Bible Notes for Daily Readers," which links together the writings of the Old and New Dispensation, the history and prophesy of the Bible, rendering them intelligible to modern readers, and which has received the unstinted approval of the religious press. As one of the editors of the *New York Independent*, and as Secretary of the New Jersey State Board of Health, he has, perhaps, contributed more to sanitary literature than any man in America.

In this connection, let me ask, what have the medical men of New Jersey contributed to the common fund of knowledge ? I shall not attempt to recite the names and works of all, for, did the time permit, I confess my inability to do so.

In History.—May be found the names of Isaac S. Mulford, Stephen Wickes, John R. Stephenson, Abram Clark, John Blane, John S. Cook, S. B. Sowers, Maurice Beesley, Rush Bateman and B. A. Watson, the author of "A Historical Sketch of Surgery."

In Poetry.—Abram Coles, James B. Coleman, the accomplished artist and brilliant author of the poem "The Cities of the Plains," and J. F. Duffield, the author of the splendid poem, "The Physician Himself," published in the *Transactions of the State Society*, in 1887.

In Theology.—Isaac Brown, Jonathan Dickenson, the first president of Princeton, and Joseph F. Garrison, a member of this Society, professor of liturgics, canon law and ecclesiastical polity, in the Episcopal Divinity School of Philadelphia, and, perhaps, more thoroughly versed in church and masonic history than any man in New Jersey.

In Legal Literature.—Charles G. Garrison, member of the Supreme Court of New Jersey ; J. S. Whit-

taker, member of the Court of Errors and Appeals ; E. L. B. Wales and others.

In Politics.—United States Senators John Condit and Jonathan Elmer, and Governor William A. Newell.

In Arms.—Major General Peter I. Stryker, General Ebenezer Elmer, General John Blane and Colonel J. Howard Willets.

In Journalism.—E. P. Townsend, William Perry Watson and Joseph Parrish, the founder of the *New Jersey Medical Reporter*, in 1847, which, in 1860, was removed to Philadelphia by Dr. S. W. Butler, and given the name of the *Medical and Surgical Reporter*. In the "literature of inebriety," Dr. Parrish stands unrivaled.

In General Literature.—Edgar Holden, Reynold Coates, Ezra M. Hunt, Maurice Beesley, Samuel H. Pennington, T. T. Price, Henry R. Baldwin, B. A. Watson, James B. Coleman, D. C. English, Abram Coles, Surgeon-General Varick, H. Genet Taylor, T. F. Duffield, John Blane, senator, general and historian, and Thomas F. Cullen, a former member of this Society, who was not only a brilliant musical composer, but also a dramatist and the well known author of "Observations of the Civil War on American Medicine and Surgery."

In Teaching.—Reynold Coates, Sylvester Birdsall, and Dowling Benjamin, all members of this Society.

In Philanthropy.—William O'Gorman, ex-president of the State Medical Society, fellow of the Royal College of Surgeons, of Ireland, and founder of St. Michael's Hospital at Newark ; Sylvester H. Hunt, the founder of the Monmouth Memorial Hospital at Long Branch, and Richard M. Cooper, a former member of this Society, and founder of the Cooper Hospital of our city.

And now I know that I have trespassed too long on your indulgence and have greatly exceeded the time assigned me. My deep interest in the subject must alone plead my excuse. In conclusion, let me say, into whatever department of life you may look, whether in science, literature, art, theology, law, arms, discovery or invention, you will find that the American physician has exerted an influence powerful and beneficent, and when the importance of the physical well-being of the people and the mighty powers of sanitary science are understood by the Government, the medical profession will advance into a still broader sphere than it has yet occupied.

WHAT THE EYE REVEALS TO THE PHYSICIAN IN THE DIAGNOSIS OF DISEASE.

By GEORGE S. HULL, M.D.,
CHAMBERSBURG, PA.

IN meeting our patients, even before going through the customary act of feeling the pulse and examining the tongue, we look, if ever so cursorily, into their eyes. And why not give these organs a more than passing glance ? May we not find in them signs which will be of great assistance to us in the diagnosis of diseases elsewhere ? This is the question I propose discussing with you as fully as the limited time at my disposal will permit ; the largeness and importance of the subject, however, are such that it would well bear an evening's study together. To the physiognomist the eye tells much of the character of the person studied ; the window through which the soul looks, frames a picture, which he at once recognizes as pleasing, or the reverse, and is prepared to govern his actions toward the individual accordingly. For practical purposes, however, the

physician need not possess the occult power of one, who by special training, learns to read so correctly the characters of those around him; what he should mainly question the eye for is, that he may read in its tissues that which may aid him in the diagnosis of disease. It is true that what he learns from the expression of this tell-tale organ may aid him much in addressing himself to the patient, and in placing the proper value upon the answers given to his questions; but what he learns from the physical examination of the eye and its immediate surroundings is of far more value to him.

It is to this physical examination we ask your attention, briefly, dividing what we have to say into two parts, viz.: what we may learn by the unaided eye, and what by the assistance of the ophthalmoscope.

1. It needs not much diagnostic acumen to discover in the eye and its surroundings the signs which point to the licentious man or to the drunkard, and a mere glance is often sufficient to convince us of a scrofulous cachexia, or even of the presence of syphilitic infection. The anæmia of phthisis and other grave diseases glistens in the pearly scleræ; jaundice floats its yellow flag boldly there, and uræmia opens wide the doors of the pupils as though presaging the soul's speedy escape. The protruding balls, with their scarcely closing lids, make us look downward to the thyroid, and thence to the heart for the dangerous exophthalmic goitre. And so, without even more closely examining the organs of vision, we are given direction in our inquiries into disease.

But to particularize, let us look more carefully at the changes the eye may take on as indicative of disease elsewhere. In the swollen lids, with their red and sometimes suppurating edges, we often see the first indications of a strumous diathesis, and to this same conclusion we are frequently driven by the appearance of phlyctenular conjunctivitis or keratitis—errors of refraction, however, must not be overlooked in the examination of such cases. Swollen lids, without inflammatory signs, should by their puffiness suggest to us renal or heart disease, or the overloading of the system with arsenic. In the newly-born, purulent ophthalmia warns us that the germ of gonorrhœa is somewhere in the home, and in the older grown may enable us to locate it on the patient himself. Obstruction of the lachrymal duct, with its annoying results, lead us to examine the nasal passages for catarrhal disease. The red, suffused eyes of measles makes us more sure of our diagnosis when other eruptive diseases are about. Looking still more minutely at the structures of the eye we may occasionally find the parenchymatous form of keratitis, and when recognized we at once turn our attention to the teeth, and look for the notched or concaved incisors, so well described by Hutchinson, and, then, according to this eminent authority, we say we have evidences of inherited syphilis; the same diathesis we may believe to exist, or at least a scrofulous or rheumatic one, when we view the ravages of the recurrent attacks of episcleritis.

Looking deeper into the eye we may find in the rough edges of the iris, or in present synechia, the signs of an old iritis; or, in the contracted pupil, the dull colored iris, coupled with the characteristic neuralgic pains, recognize the occurrence of a present attack; here we are led again to think of syphilitic taint, or of the rheumatic or gorty diathesis, for iritis not caused by traumatism is of rare occurrence in a good constitution.

When we see the rapid formation of double cataract in the young or middle aged, we should always be suspicious of diabetes, if that disease has not already been diagnosticated.

2. Calling to our aid the ophthalmoscope we penetrate beyond the lens, and in proportion to our skill in the use of this important instrument, do we find its value as an aid in diagnosis.

Now we have laid bare for our scrutiny arteries, veins, nerves, and nowhere else does Nature give us so close a look into her mechanism. We may fairly judge from the anæmia of the retinal vessels, the depraved condition of the general system; from their hyperæmia we look for excited action of the heart, and in passive congestion, fear mitral disease, emphysema, thrombosis, and the like. Frequently we see pulsation of the veins, often having no special significance, sometimes signifying increased intra-ocular tension; more rarely we view arterial pulsation, which may mean so serious a heart disease as aortic insufficiency. Faint arterial pulsation may also be seen in acute anæmia from hemorrhage, and more marked in glaucoma, in which disease, however, the throbbing is confined more to the disc, and is accompanied by the usual symptoms of cupping of the disc, shallowness of the anterior chamber, steadiness of the cornea, etc. Hemorrhages from the vessels are easily detected, and, according to their character, lead us to suspect leucocythæmia, pernicious anæmia, putrida hemorrhagica, scurvy, or hereditary conditions, or dyscrasia, which are capable of producing degenerative changes in the walls of the vessels.

Looking at the internal coats of the eye one may see such strong evidences of tuberculosis as the tubercles themselves, especially upon the choroid; and syphilis may register itself upon the retina and choroid in signs almost as distinct.

Rarely we may see in the eye some of the entozoa, the commonest being the cysticercus cellulosæ. The echinococcus hydatid may also develop there, as may numerous kinds of growths.

An important aid in the diagnosis of so serious a disease as Bright's disease is the condition of the retina, as seen by the ophthalmoscope; inflammation of this delicate structure may be developed in any form of this affection. Albuminuric retinitis most generally appears in the latter stage of Bright's disease, when the disease has been long recognized by the other signs, and yet it frequently happens that the ophthalmoscopist is the first to detect this malady.

Of late years the eyes and their appendages have been carefully studied, as being valuable indices of the condition of the nervous system. We readily appreciate how this may be when we consider that of the twelve pairs of cranial nerves one-half send branches to these organs, and the two, three, four and six pairs are distributed exclusively to them. In addition, the sympathetic system is well represented, and the blood and lymph circulations are closely connected with those of the cerebrum. Intra-cranial pressure is almost certain to be felt in the eyes, and inflammation of the optic nerve is nearly always the sequence of some growth in the cranium. Gowers thinks that in at least four-fifths of all cerebral tumors, optic neuritis occurs at some time. So when we see papillitis, or the so-called "choked disc," we are likely to find back of it some cause for pressure in the cranium; whether it be a tumor, syphilitic deposit, abscess, meningitis, hemorrhage, etc., is often a question for experts to decide. In the insane we frequently find marked disturbance of the pupils, and

of the muscles of the eyes ; and locomotor ataxia and other like affections, due to lesions of the nerve centers, frequently present motor disorders.

Passing from these conditions, which indicate, and often so plainly, many serious diseases of the nervous system, we note some less definite ones which tell us of toxic poisoning by alcohol or tobacco. The slight œdema of the disc, with the accompanying tortuosity of the retinal veins, may not be so easily recognized, but the color scotomata, especially that for red, will assist us in connecting the amblyopia with the abuse of these narcotics. Many a slave to these habits has been induced to break off by the approaching blindness, after all other means have failed.

And now, having spoken, briefly and perhaps too indefinitely, of some diseases which register their signs in the eyes and their appendages, and may often be diagnosticated—or, at least, have their diagnoses made more complete—by means of a careful examination of these organs, I come to the last part of my paper, which I may outline as—what the ophthalmoscope tells us, that will often explain such symptoms as the following : headache, frontal, temporal, occipital, etc ; numerous disorders of digestion, sick headache, obscure nervous symptoms, dizziness, "car sickness," and occasionally chorea, and even epilepsy.

In order to limit myself to the allotted time, and yet impress you with the importance of this part of my theme, I will quote a typical case from my notebooks, and briefly comment upon it :

Mrs. C., a very spare brunette, mother of one child, aged ten (herself thirty-six), says she has suffered for sixteen years with almost constant headaches, coupled with dyspeptic symptoms, and pains in the back and sides. She is a woman of intellect, one whose life has been spent more among books than in the performing of household duties. She has undergone numerous treatments by physicians for catarrh, dyspepsia, "spine disease," uterine diseases, neuralgia, etc., and all with no result ; the relief, indeed, being only to disappoint her, and thus increase her nervousness. At last, the ophthalmoscope is turned on her case with the following result : No abnormality noted save that it takes 0.50 dioptré more to focus the vessels in one meridian than in the opposite. Her distant vision, when tested without the use of a mydriatic, proves normal ; her near vision ditto, only when the card is brought to the nearest limit of vision, she draws away and says that it makes her sick at the stomach. Here we have a low degree of astigmatism, which, as the woman insists, causes no defect in her vision ; she knows it, because she reads a great deal, even at night, and in bed when she is too tired to sit up. Nevertheless, she was put under a mydriatic, and, with her accommodation fully suspended, her distant vision dropped but a trifle, to be again raised to normal, in the right eye, by a weak spherical lens (plus 0.25 D.), in combination with a slightly stronger cylindrical (plus 0.50 D., cyl. ax. 180), and in the left by a still weaker combination (plus 0.25 D., sph. 0, plus 0.25 D., cyl. ax 135). The treatment was a pair of spherocylinder lenses set in spectacles, and the outcome of it all : the relief of her headache and the subsequent disappearance of her other symptoms.

It may seem surprising that such a trifling error of refraction could set up so much trouble. Of course, the woman's occupation and the sensitive condition of her nervous system had much to do with it ; the same amount in a South-Sea islander might not have bothered him at all ; but in civilization, as a rule, small errors of this kind cause more distress than the

gross ones, and the reason is, that the muscles of accommodation, when they can overcome the loss of refractive power by making the lenses more convex, do so, and the eyes attain normal vision, but the possessor of such eyes works them under a stress which, according to the use made of them, may sooner or later bring about a train of symptoms which are not always limited to the eye, but, reflexly, affect many other parts of the body, and throw the physician off his guard in their treatment. A large amount of the same kind of error may mean more reduction of vision and less asthenopic symptoms, because the ciliary muscles, not being able to reach normal vision, do not strain themselves trying to do so. In these cases the patients, realizing the much lowered condition of their vision, seek glasses for the betterment of it, and get all the other relief into the bargain ; while in cases of small errors, the sufferers are often treated for their symptoms, and the *cause*, being unrecognized, goes uncorrected.

Had I time to quote more cases I could show how even such intractable diseases as epilepsy are sometimes much benefited by correcting lenses ; and I have the record of one case of irritable heart, which held out against all forms of treatment until a compound hyperopic astigmatism was discovered, and a pair of proper spherocylinders adjusted. I would also show how a so called dull and stupid child often has the rod misapplied at school, or how disappointment and sorrow are felt at home by the report that the child will not apply himself to study, when all the suffering and disinclination to study are caused by defective eyes, and what the misunderstood child wants is a pair of properly-fitted spectacles. But such things are fast becoming common knowledge, and soon we may have upon our statute books laws compelling all school children to have their eyes examined before beginning their course, just as vaccination is required now. Let us hope that, at the same time, a law will be enacted which will prevent the more than possible ruination of many eyes by incompetent traveling opticians.

I will conclude by merely mentioning several other indications the eye furnishes which are of value. In poisoning by such well-known drugs as belladonna, stramonium, hyoscyamus, cocaine, and strychnia, there is dilatation of the pupils, while the reverse obtains where the deadly drug is opium, or physostigma, or pilocarpin, etc.

In the administration of ether and chloroform, we should closely watch the pupils, whose enlarging should warn us of impending danger ; a rapid dilatation in the use of the latter anæsthetic should call for a sudden halt in the proceedings.

LARVÆ OF DIPTERUS IN THE HUMAN INTESTINE.¹

By H. O. JEWETT, M.D.,
CORTLAND, N. Y.

MY attention was called about twelve months ago to the larvæ which form the subject of this paper. They were brought at nearly the same time, to Dr. Caleb Green and the writer, by two different patients living not far from three miles apart. One, a man of about thirty-years, the other a young school girl, both intelligent, reliable persons, who, confident that they had discharged them from the bowels, were at first somewhat alarmed.

¹ Read before the New York State Medical Association, at New York, November 29, 1891.

The larvæ, of which we had seven or eight in all, were of different sizes, varying, in their fresh state, from seven to fifteen lines in length, resembling in form, but larger, more elongated and rather more tapering at the extremities than the larvæ of the common bott or gadfly. They appeared to be entire, with no distinct marks of segmentation, having rudimentary feet, or prolegs, and a tail about the size of a common knitting needle, evenly tapered and somewhat longer than the body of the worm.

Those brought to us immediately after they were believed to have been voided, were very active, and of a nearly white, very soon changing to a dark mud-color by exposure to the light and air.

The first and largest specimen, measuring one and one-quarter inches in length, was brought to me by the man—a carriage painter and repairer by trade, very fond of, and considerably accustomed to the care and management of horses.

This man lives in a new house, situated upon dry, gravelly soil, in a newly built-up part of the town, with clean, wholesome surroundings. He is a man of correct habits, ordinarily cleanly in his person, a good liver, and obtains his water for drinking and culinary purposes, from a driven well with twenty-five feet of pipe. Such a well as is in common use upon our flat lands—affording pure water, if not in too close proximity to marshes or cess-pools.

This patient has usually enjoyed fair, though not robust health, but had, for several weeks complained of a capricious appetite, some considerable irregularity of the bowels, with occasionally bloody stools, attended with severe spasmodic, gastric, and abdominal pains, and frequent, but transient nausea.

Believing, as many others do, that he had worms, he sometimes fancied he could feel them crawling in the lower bowels. For these symptoms he had occasionally taken a vermifuge composed of some mercurial with a few grains of santonin, with apparently no other result than the cathartic effect.

While at stool, one afternoon, feeling an unusual tickling sensation about the anus, he turned to look for the cause and discovered the larvæ partly imbedded in the freshly voided excrement. Confident, from its situation, as well as from his own sensations, that he had passed it, he put it in a small vial and brought it to my office.

On the following day I took it to Dr. Green for examination, and found that the doctor had just received one of the same description from the young lady.

The history of this last was as follows:

Dr. Green had treated the girl from time to time, for severe attacks of spasmodic gastralgia with nausea, frequent colicky pains in the lower part of the abdomen, and some nervous symptoms.

The mother, believing that the girl was "troubled with worms," gave her, in the course of a day, three doses of what was called "*Kickapoo Indian Worm Medicine*," a nostrum containing some cathartic properties. The next morning, before going to school, the girl had two evacuations from the bowels, using a clean, white, earthen vessel in her room. After defecating, curious to observe the effect of her vermifuge taken the day before, she examined the stool, saw the larvæ and reported to her mother who went at once to the vessel and inspected its contents, finding the worm squirming about as if annoyed by the urine present with the fæces.

She was struck with its peculiar appearance, its activity, and particularly with the tail, as she expressed it, "like that of a mouse." Naturally anxious

about the condition of her daughter, she put the worm in a small tin box, and sent the girl directly to Dr. Green with it.

We compared our specimens, found them identical, and our first impressions were that they were solitary, accidental entozoa; not such from preference, but by chance. But, upon subsequent search, several more were found among the ordure in a commode or closet used by the girl and some other members of the family.

This family, like the other, live in a healthy locality in the suburbs of the town. They are remarkably neat and tidy about their house and household affairs, are good wholesome livers, and obtain their water from a driven well more than thirty-five feet deep through loose, gravelly soil, and probably a stratum of clay several feet below the surface.

These wells, unlike the old-fashioned dug wells, admit no surface drainage, but afford, so far as known, pure water at all times.

Thus it will be seen that there is nothing about the surroundings, the habits or the diet of these people which apparently offers a clew to the origin of the parasites.

The above mentioned include all of this species of larvæ which we have seen, or heard of, in this or any other community. And it is evident that they must be rare to have so long eluded the general observation of, and received so little attention from expert entomologists.

Of course, we saw none of these things emerge from the rectum, nor could we be expected to furnish such positive evidence.

Neither could our patients have seen them discharged; but they aver that they felt them, and found them involved in the freshly voided excrement.

Had these all been brought to us by a hysterical girl, without corroborative evidence, we might have had some reason to suspect it as one of those freaks so common to that class of patients. But even then, they would have been a curiosity, leaving us to wonder how she could have obtained them in their obviously fresh condition.

But, to summarize the testimony, myself vouching for the credibility of the witnesses: We have an adult man and a young girl, living miles apart, strangers to each other, and neither one cognizant of the experience of the other. Yet they come to us, at about the same time, with separate accounts of a corresponding experience. There was no chance for collusion, and no good reason to distrust the sincerity of our patients.

It is scarcely possible that the man could have been mistaken when, prompted by his sensations, he turned immediately to examine his stool and saw the larvæ in the condition which he described.

Nor is it at all probable that the young lady would have failed to see the worm, by daylight, in the white vessel, had it been there beforehand; or that it could have reached there unobserved, during defecation, except by being voided with the stool.

I had observed that, while these creatures were quite lively in fluid or semi-fluid substance, they could make very little headway upon a smooth, hard surface; hence they could not have climbed the outside of the vessel, or reach any point above, so as to have fallen into it.

But circumstantial evidence is sometimes better than direct testimony, and, as significant circumstances, we have the previous condition of our patient, as observed by Dr. Green and myself. Their subjective symptoms justifying a diagnosis of vermi-

ous irritation, the appearance of the parasites soon after the administration of well-known anthelmintics, and we have the additional fact, that those patients have since remained entirely free from the harrassing symptoms complained of before.

It will also be remembered that those of the larvæ shown us immediately after they were supposed to to have been voided, were of a pearly-white, suggesting an internal origin, whereas, had they been developed in any outside situation, they should have been of the dark color which they so soon assumed on exposure, and as were those found at a later period.

That these are, indeed, true entozoa, either from preference or by chance, and being expelled like other entozoa are afterwards discovered in the ordure, or, that they have a chosen habitat among, and a special affinity for, human excrement, must be apparent.

Recognizing the fact that many species of dipterus seek a place in loose earth and decomposing vegetable matter during the proper state, I have caused search to be made for traces of them in the decaying refuse of wood piles and stables, but, thus far, with entirely negative results.

Not desiring that you base your judgment upon our belief, I have been thus particular in detailing the facts bearing upon the probable origin and source of these larvæ, in order that you may form your conclusions independent of any conviction of our own in the matter.

I sent several of our specimens, by mail, to Dr. A. L. Carroll, of this city, and am indebted to the doctor's researches for the identification of them as the "Bat-tailed Larvæ" of a rare species of dipterus which, though not hitherto unknown, has received very little attention from scholars and writers upon the subject.

According to the doctor's authority, the tail, which is a distinguishing characteristic, is a respiratory organ, disappearing like that of the mosquito during the pupa stage, and giving place to quasi horns.

Whence these things come, and how they are introduced, are, as yet, matters of conjecture. But the ova, once ingested, the vitality of the embryo may resist the process of digestion; and, though they have no hooks by which to attach themselves to the mucous membrane, like botts, they may be able to maintain their occupancy of the alimentary canal for a season at least, during the larval growth.

It is not to be supposed that, in this larval state, they can multiply by propagation, or that they can maintain their tenancy beyond a definite and limited period; yet they are by no means desirable, even as temporary guests.

A few instances have been reported of the presence of botts in the stomachs of grooms; also of the well-known gadfly, the *oestrus bovis* and *oestrus ovis* respectively, beneath the skin, and in the frontal sinuses of man.

But, I am aware of no previous authoritative report of the "rat-tailed larvæ" having been discharged from the human intestines.

Questions of importance, in a sanitary as well as scientific point of view, are: To what particular species do these belong? What is their most natural habit? And where does the insect deposit her ova? Are they habitual or merely accidental parasites?

Other questions of importance to the physician are: How do they reach the human stomach? If, in food or drink, what food or drink is responsible for their introduction? Are they taken in meats, fruit, vegetables or water?

Their extreme activity, in all probability, rendering them more offensive and annoying than ordinary internal worms, how much mischief may they accomplish by their presence as entozoa?

What sanitary or dietetic precaution will most effectually prevent or dislodge them?

But, whatever their type or origin, whether they be harmless, earth-born denizens of the outer world, or unwelcome tenants of our interior, they are certainly of sufficient interest to invite the careful attention of physicians and naturalists.

Other members of this Association may have preceded me in the discovery of these curious larvæ, and it is for the purpose of stimulating inquiry and eliciting further information that I have brought the matter before you, with an exhibition of the specimens, to-day.

In addition to what I have said, Dr. Carroll will kindly give you the result of his researches in elucidation of the subject.

OBSTETRICS AND GYNECOLOGY.

By E. S. MCKEE, M.D.,
CINCINNATI, OHIO.

THE GYNECOLOGICAL USES OF ARISTOL, ICHTHYOL, IODIZED PHENOL, RESORCIN, CREOLIN, AND CHLORIDE OF ZINC, by Dr. C. D. Palmer, Cincinnati. The author has found aristol superior to iodol and iodoform. It is unirritating, non-absorbable, and has no toxic effect. It possesses stimulating, alterative, and anæsthetic properties. He uses it in the pure form, as a powder, applied by insufflation. In narrow passages it may be used by suppositories. It becomes an admirable dry dressing for some cases of chronic vaginitis, vulvar pruritis, cervical endometritis, cervical erosions and fissures, mammary fissures, and syphilis—primary and secondary. Aristol gauze can be made by impregnating plain gauze with an ethereal solution of aristol, containing from 1 to 2 grammes of aristol per yard. Crayons for the urethra or uterus can be prepared by using at least 1 gramme mixed with a sufficient quantity of gelatine or gum acacia.

Ichthyol appears to favor the healing processes, mitigating pain, and favoring the absorption of inflammatory exudates. Dr. Palmer has utilized ichthyol in three ways, giving it internally, applying it externally and topically to diseased structures. His experience so far has been rather favorable, but not enough so to justify an enthusiastic expression. He employs iodized phenol more frequently than any other medicament within the whole range of medical preparations, excepting Churchill's tincture. He uses it for chronic morbid conditions of the endometrium, with or without special functional disorders. He employs it by ingestion and injection, without, or following, curetting. The drug is antiseptic, alterative, astringent, mildly caustic, and hemostatic.

Resorcin has proven an admirable remedy, combined with boracic acid and white vaseline, or incorporated with the ointment of the oxide of zinc as a salve, to be applied to certain skin diseases of the external generative organs, and to foul-smelling, indolent ulcerations in the puerperal as well as gynecological conditions. Creolin is an efficient germicide, and in some respects is more powerful than carbolic acid, more destructive to the micro-organisms of various diseases, and of suppuration. It is less toxic than carbolic acid, but is not entirely void of toxicity. Chloride of zinc is valuable for vaginal and endometrial morbid conditions. All malignant dis-

eases of the uterus for any cause, rendering partial or complete hysterectomy unjustifiable, are signally improved in general health, given a prolonged life, and materially bettered in all local symptoms by a thorough application of the zinc chloride after sharp curetting. He has used intra-uterine tampons saturated with a solution (from 25 to 50 per cent. strong) or crayons, equally strong, a protection of the vaginal mucous membrane being maintained at the same time.

THE PREVENTION OF RETROVERSION OF THE UTERUS (A. Lapthorn Smith, Montreal, *Journal of Gynecology*, September, 1891).—The sensitive uterus thumps down upon the sacrum, or, in some cases, pounds the imprisoned ovaries. If accoucheurs would adopt a few simple rules, all this suffering might be saved. First, to instruct patients not to lie on their backs, but to lie occasionally on their faces, and to turn freely from side to side. Allow them to sit up while taking meals, and to relieve bladder and bowels. Not to allow bladder distended the first few days, but order catheter passed every eight hours at least. Abandon use of obstetric binder until involution is complete and patient up, and uterus anteverted. To order the simplest case a daily douche of plain or medicated hot water, so that, if retroversion does occur, it may not be rendered hopelessly incurable by adhesions. To keep the bowels in an easily movable condition, so as to avoid forcing the uterus when retroverted still further into the hollow of the sacrum.

THE ADVANTAGES OF ELECTRICITY IN PELVIC INFLAMMATORY TROUBLES is thus summarized by Dr. Geo. F. Hulbert, of St. Louis. The value and position of electricity in the method advocated and that places the result as due to its use is dependent :

1. The fact that in all other conservative methods recovery is not the rule, be the means used, drugs, local treatment, or otherwise. Occasionally, through Nature's unaided efforts, recovery results with time ; but these cases are exceptional. Simple aspiration has been tried and found wanting, except in a few cases.

2. Prompt and progressive improvement observed within the shortened time required, usually averaging from one to nine months, according to the severity of the case.

3. The uniformity of results, non-recovery being the exception.

The author states that over 100 cases of pelvic diseases in which the inflammation had extended to the pelvic peritoneum had been treated by electricity. Four cases of pyosalpinx had been relieved by this method. Five cases had been relieved by the discharge of pus from the tube through the uterus. The remaining cases treated were not those in which suppuration existed, but inflammatory conditions, involving the tissues from endocervix to pelvic peritoneum.

TUMORS OF THE DECIDUA (*Centralblatt für Gynecologie*, June 13, 1891).—Prof. Säger has collected a considerable number of cases of deciduoma. A perfectly innocent form exists which must not be mistaken for inflamed and degenerate relics of decidua left adherent to the uterine walls. Säger and Chiari have observed a malignant deciduoma which gives rise to metastases—a true sarcoma of the decidua, in fact. Foul discharge and hemorrhage follow delivery, and death occurs within six or seven months after symptoms of disease in the bones, lungs, and other organs. The metastatic deposits in

the lungs resemble decidua, bearing the characteristic cells.

In the discussion on Prof. Säger's paper (*Union Medicale*, June 2), Dr. Muller stated that he had seen a case where masses of decidua-like tissue were found in the uterus, and metastatic deposits developed in the vagina, abdomen, and nates.

AMENORRHOEA AND DYSMENORRHOEA (*Le Bulletin Medicale*).—Apiol, the active principle of the seed of parsley, is an oily amber-colored liquid, insoluble in water but soluble in alcohol, ether or chloroform. It is absolutely harmless in its physiological action, even in commencing pregnancy. A dose of 8 to 15 minims produces slight cerebral excitement, a feeling of well-being and a sensation of heat in the stomach. In doses of $\frac{1}{2}$ to 1 drachm it produces veritable intoxication, accompanied by vertigo.

THERAPEUTICS.—It appears to have an action on the uterus similar to the action which digitalis has on the heart. It regulates menstruation. Therefore it is useful in all the derangements of menstruation, viz. : amenorrhœa, dysmenorrhœa and metorrhagia, provided the disturbances be idiopathic. If, however, these diseases be due to organic affections then these organic affections must be directly treated.

As disorders of the menstruation are a common cause of sterility, apiol may be said to be a remedy for the latter disease.

In order that apiol may exercise its most powerful influence it should be administered just prior to the beginning of the menstrual flow.

CONSANGUINITY, CONCEPTION, AND MALFORMATIONS (*British Medical Journal*).—Has the condition of the male parent, when begetting, any distinct influence on the offspring? A case related by M. Gueniot, at the Paris Academie of Medicine, would seem to favor the theory that there is such an influence ; but in this case consanguinity must also be taken into account. A woman married her nephew, a man three years younger than herself, and long addicted to absinthism and other forms of intemperance. She declared that he was always partially drunk when she admitted his embraces. Seven children were born of which only one survived, and several were deformed. The last child was of great size causing difficult labor. It was anencephalous, with six fingers on each hand, and six toes on each foot ; the external genitals were absent. Two large serous cysts occupied the liver, and were the cause of the great bulk of the child. Considering how some of the most minute physical peculiarities and some of the most subtle mental characteristics are transmitted from father to child, it is not wonderful that the offspring may be influenced by the state of its size when impregnating the mother. The influence is probably indirect in a case like the above. No doubt absinthism and ordinary intemperance affect the nutrition of all cells and fluids, spermatic included. The nervous condition of the mother may be unfavorable under the circumstances. The share of consanguinity in this case is doubtful. Recent researches tend to show that unions of consanguinity may keep up or intensify disease and malformations already in the family, but there is no evidence that they cause new maladies and deformities.

MORPHINE IN PREGNANT, PARTURIENT, AND NURSING WOMEN (*Archives d'Obstetrique et de Gynecologie*, March, 1891). First gives the result of his studies to determine the effect upon the foetus when morphine has been administered to the mother. In one case 1,200 hypodermic injections of a 3 per cent. solution

of morphine had been taken during pregnancy, and in a later gestation 800 injections of the same strength. Before labor the foetus was quiet after the drug was given to the mother until its effect began to wear off, when foetal movements were very active. After birth the children manifested no signs of physical or intellectual ill development. Furst concludes from this and other observations that morphine does not endanger foetal life to so great an extent as has been thought. Used moderately it is not a dangerous drug for pregnant women.

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, November 25, 1891.

CLINICAL CONTRIBUTIONS TO BRAIN SURGERY.¹

WAS the subject of a paper by JOHN B. ROBERTS, M.D.

DISCUSSION.

DR. M. PRICE: I should like to ask a question, and that is in regard to the propriety of removing a clot in a case where the operation has been delayed for some time, and where, after trephining, it is found that the clot has become adherent, and where the attempt at its removal is followed by free bleeding. This operation presented itself in the case of a young man injured in an iron works, in Phoenixville, some two weeks ago. A small stove shovel was thrown at him, the handle striking and penetrating the skull. For the first day or two there were no symptoms of paralysis. Dr. Shoemaker was called to the case a week or so after the accident, and at once decided on operation, at which I assisted him. There was incomplete paralysis of the right side, and there had been some slight convulsive attacks. The trephine opening overlapped the clot and the depressed fragment of bone. As I have said, the clot was adherent, and the attempt at removal caused free bleeding. We allowed it to remain, thinking that this would do less harm than the violence necessary to remove it. So far, the result shows that we acted rightly, but what the final result will be I cannot say.

Some of you may recall two murder cases which occurred in 1873. They were both cases of penetrating wounds of the skull through the eyeball, produced by umbrellas. One was a man who, after the injury, came to the Fifth street dispensary, where I examined him. He then went to his home in Camden, where he died in a few days. The second case was that of a drunken woman, whom I saw four hours later. She was wounded by her husband in his attempt to ward off her blows. She was removed to the Pennsylvania Hospital, where she died.

DR. T. S. K. MORTON: I did not understand Dr. Laplace to state that any provision for drainage was made at the time of the first operation. That might possibly have warded off some of the consequences of the injury.

I should like to ask those present their views and experiences as to the results of operations for epilepsy. It has been my fortune to see a good many cases of epilepsy operated upon, not only where the malady originated in the brain, but in other ways, as from phimosis, contracted tendons, neuralgic testicle, etc., and in none of these cases, if my memory serves me

right, has there been a permanent cure. In one case, where a contracted tendo Achillis was divided, the seizures remained absent for two years, and then returned. It has seemed to me that possibly the profound anæsthesia has something to do with preventing the occurrence of the attacks.

I had one case of what was considered traumatic epilepsy referred to me by Dr. Mills, that of a child two years of age, who had fallen, striking its head on a piece of iron. Before the accident there had been no epileptic seizures; after the injury seizures soon began, and recurred with great frequency. A thousand convulsions were counted in a short time. These involved one side of the body, apparently beginning in the centers for the thumb, finger, and arm, extending down the right side, and subsequently becoming general. It was decided to apply a large trephine over the arm center, and see what was there. An inch-and-a-half button was taken out. The dura was thickened, and I dissected it entirely away, leaving a margin of an eighth of an inch all around the trephine opening, so that hemorrhage could be readily controlled. There being no apparent lesion of the brain, the oedematous pia mater was not opened. The button of bone was not replaced. The flaps were sutured, and catgut drain introduced. The drain was removed ten hours after the operation, when the dressings were found saturated with serum. The wound healed by primary union, and the child went home into the country on the tenth day. I understand that there has been no material improvement in his condition.

DR. CHARLES K. MILLS: I can recall ten or twelve of my own cases of epilepsy in which I have had operations performed, and I have been present at fifteen or twenty other operations, so that I have a personal experience of some twenty-five or thirty cases of operation for epilepsy. I have also paid a good deal of attention to the theoretical part of the subject. I am sorry to say that the results, in the majority of cases, have not been permanently good; but I do not feel altogether discouraged in regard to cranial and cerebral operations for cases of this character. There are reasons why these operations have not succeeded. Some are inherent to the condition, while others are dependent upon errors of diagnosis, while still others are dependent upon the fact that the convulsive habit has been induced by the long continuance of the condition.

I have had two cases of cortical excision. One of these will be reported by Dr. Keen in the coming number of the *American Journal of the Medical Sciences*. In this case a small tumor was found in the center of the trephine opening, which proved to be a sarcoma. A part of the cortex, an inch in diameter, was also removed. Although the patient improved after the operation, she is now practically no better than before the operation. It seems to me that in this case the brain and nervous system had been so influenced by the long continued convulsions that they could not recover. The great difficulty in many of these cases is the late period at which the operation is performed. In nearly all cases of epilepsy, except those due to recent traumatism, the affection has existed for some time. And then there are secondary changes which cannot be removed by trephining.

I think that of all cases certain classes of hemorrhage present the greatest likelihood of benefit from operation. These are certain supra-dural and sub-dural hemorrhages, which can be pretty well localized. In the case of Dr. Price, I think that it would have been better to remove the clot as a whole;

¹ See page 495.

not, perhaps, by traction, but by a second trephine opening. In some cases these dural and sub-dural hemorrhages do lead to permanent epilepsy, even though at first no symptoms are present.

I believe that the most brilliant results, although we have not had them yet, will be in cases of brain tumor. In this class of cases, fibromata offer more chance than any other forms of growths, for, usually, they do not permeate the brain. Some old syphilitic tumors, and a few of other varieties, can be removed. The difficulty in these tumor cases is that they have been left too long.

DR. JAMES HENDRIE LLOYD: The cause of the paralysis of the arm on the same side as the tumor in this case seems obscure, but I inferred from what Dr. Roberts said that he was not himself certain of the accuracy of this observation. I can hardly see how that tumor could cause hemiplegia of the same side, unless it acted as a cerebellar tumor sometimes acts—by downward pressure. In some tumors of the cerebellum there is hemiplegia on the same side from pressure downward on the motor tracts below their decussation. In this case the tentorium would probably prevent such downward pressure, and I hardly see how the alleged fact could be explained in this way. The brain has not been thoroughly dissected, and there may be some other lesion, as hemorrhage or a secondary growth, which has caused this symptom.

DR. ROBERTS: I was much interested in Dr. Laplace's case, but I do not quite understand the condition of affairs. I understood that the temperature, which had been high, had descended to about normal before the operation. I should like to know what was the character of the clot some two weeks after the accident. Was it broken down or partially organized? It seems to me that it would be difficult to get away an old clot of blood, which would be fibrinous, from such an irregular surface as the base of the skull. I could not help thinking that possibly the clot removed was one due to the manipulations at the base of the brain. Again, was the discharge from the wound serum from blood-clot, or was it cerebro-spinal fluid mixed with a certain amount of inflammatory exudate? While the result has been exceedingly brilliant, I could not help thinking that perhaps if no operation had been done the patient might still have recovered. As the history, as I remember it, seemed to indicate beginning improvement, was it absolutely necessary to keep the wound open for a number of days? I can understand that drainage is necessary in recent brain injuries, but in this case the drain was used at a late period and kept up for some time. The case is one of extraordinary interest, and I simply wish to have these points brought out clearly, as I failed to grasp the points when the report was read. No unjust criticism is intended, but I wish to study the case.

It seems curious that in my specimen of brain tumor there should be right-sided hemiplegia, but I think that there is little question that it was on the right side. I inquired in regard to eyesight, and, as far as known, there was no blindness or deafness. Very few symptoms were noted, as the patient was in a public institution and made no complaint until a few days before her death. I would have been interested to hear in regard to the probability of the paralysis being due to pressure upon the longitudinal sinus damming back the blood and making secondary pressure, as it were, on the opposite side.

DR. LAPLACE: I would state in reply to Dr. Morton's question, that at the first dressing I put in an

iodoform drain, which remained in until the time of the operation.

In regard to the points suggested by Dr. Roberts, I would say that I was well aware that on the thirteenth day the clot would not be in the condition that it was on the second day. I knew that it would be fibrinous, and, in order to entangle it, I devised the little instrument shown.

A few hours after the accident the temperature rose to 104° , and then for the next ten or twelve days varied between 100° to 103° . The coma then began to increase. Because the temperature before the operation was low, it did not follow that the patient was getting well. The patient was really worse. He was more comatose and he could not swallow. He had to be nourished by the bowel. Something had to be done, or he would die. I relieved the intracranial tension and provided for drainage. There must be drainage in cerebral surgery on account of the unyielding nature of the cranial wall.

MODIFIED JUNKER INHALER, WITH POINTS FOR DISCUSSION ON ETHER AND CHLOROFORM NARCOSIS.¹

Was the title of a paper by MARIE B. WERNER, M.D.

DISCUSSION.

DR. JOSEPH HOFFMAN: I have used this instrument quite a great deal, and its utility for chloroform inhalation is unquestioned. The quantity of chloroform required is much diminished by its use; for an extended abdominal operation I have more than once had a drachm of chloroform suffice. Nor have I seen any bad effects from chloroform when this instrument was used, although I do not believe that the bad effects are completely obviated. In two or three cases I have found that ether had to be abandoned and chloroform substituted.

So far as the report of the Hyderabad Commission is concerned, I do not think that in this country it will be accepted as final. The results of experiments on animals are not always applicable to man. In the sudden deaths in man, fatal result is brought about by action of the anæsthetic on the heart, and not on the respiratory apparatus. Chloroform paralyzes reflex action, while ether stimulates it. In children there is little danger from chloroform, and in children too the reflexes are stronger than in adults.

So far as the application of this apparatus to the administration of ether is concerned, I do not think that it will work, as it is not possible to obtain a dense vapor of ether in sufficient quantity. If the apparatus were modified so that a large quantity of vapor might be produced, the effect might be better. Finally, too, it is to be insisted, that to obtain good results and to escape the dangers of anæsthesia, we must depend rather on the anæsthetizer than in any apparatus he uses.

DR. JAMES COLLINS: I recall very well the time when we had no ether. It was chloroform. Chloroform was found in all the medical chests and was given with impunity. We never thought of danger, provided the man was sufficiently recovered from shock. I saw only one accident from chloroform, and that was after the battle of the Wilderness. We had been giving chloroform all day, when a man came in with a wound of the hand; he took a few whiffs of chloroform, and expired. In his case the rule had not been observed—that is, not to give the anæsthetic when the man was under the influence of shock.

¹ See page 502.

The shock from gunshot wounds often acted strangely. Men with severe wounds would walk long distances to the hospital with no sign of shock, and yet, when placed in bed would, in a few minutes, present marked evidences of shock. It was with some regret that I saw the reaction against chloroform that came later. Chloroform is certainly more pleasant than ether, and I think that if properly given it is as safe as ether. I have seen death from ether. It was a case of pistol-shot wound; ether was given and the shock came on while the man was under the influence of the anæsthetic, and he died. Many years ago, at the University, we gave a mixture of ether and chloroform. From that, I saw no accidents.

DR. JOSEPH LEIDY: The only death that I have seen from an anæsthetic occurred while chloroform was being administered with this apparatus. The chloroform was administered by a gentleman who had been in the habit of using this instrument almost daily for months. I think, however, the death would have occurred whether the instrument had been used or not.

DR. JOHN B. ROBERTS: I have seen six deaths attributed, and probably justly, to anæsthetics. Fortunately, in none of these was I the administrator of the anæsthetic. I never had a patient etherized without feeling a great deal of discomfort, especially if the ether is given by the ordinary individual that administers ether. The majority of them do not know how to give ether unless they have seen a death, or nearly killed some one by ether. If ether or chloroform is given 100,000 times without a death, it is no proof that there is no danger in the administration of ether or chloroform. Although the Hyderabad Commission decided that chloroform is better than ether, yet I think that Dr. Wood echoes the sentiment of this portion of the country, at least, when he says that ether is the safer.

It seems to me that the difficulty is that the anæsthetic is placed in the hands of incompetent people, who do not know how to give it and do not pay attention to their work. In several of the cases of death from anæsthesia which I have seen, I believe that the result was due to the carelessness of the administrator. A short time ago, I saw a patient nearly die from ether, and he was only kept alive by about an hour and a quarter's artificial respiration. The trouble in this instance was due to the fact that I, the operator, called the attention of the anæsthetizer from his work. I have scarcely used chloroform, and have seen very little of its use, but, if the evidence of literature is worth anything, it is in favor of ether. I do not believe that it is the shock of injury; I believe that it is the chloroform that kills. Chloroform is certainly the more powerful and more dangerous agent. In spite of the objections to ether, it seems to me that the opinion of the Philadelphia profession in favor of ether is correct, and is borne out by the literary evidence.

DR. T. S. K. MORTON: I have had an opportunity of examining this apparatus, and so far as apparatus goes, it seems superior to any that I have seen. But I do not see that any method for administering chloroform can be better than the little wire frame, invented, I think, by Esmarch. So far as ether is concerned, I dispense with all apparatus; especially do I dislike the Clover apparatus, where the patient respire the same air over and over. In most cases, ether is given badly. Just as I have learned to give ether in less condensed form, so have my results been more satisfactory. The cone, as usually employed, is extremely objectionable; and towels, as

found at patient's houses, are usually impregnated with starch, and will not absorb the ether or allow air to pass freely through. Unless you obtain very old towels or napkins, it is either difficult to etherize the patient, or you have to give the ether in too concentrated form. Some two or three years ago, it struck me that it would be well to use cheese-cloth for this purpose, and since then, I have used nothing else. I use small squares, about six by seven inches, consisting of ten or twelve thicknesses of the gauze. This is placed over the patient's face and the center raised up by puckering the lateral edges. This offers no obstruction to the passage of air. The ether is dropped upon the center of the gauze from above. I have etherized a child by this method, and kept it under the influence of the anæsthetic for ten minutes, with but one dram of ether.

DR. WERNER: In presenting this apparatus, I did not wish to be understood as advocating the general use of chloroform. It seems that there are some cases in which it can be used with better advantage than ether, and, therefore, it is well to know the best method of administering it. I think that the trial alluded to by Dr. Hoffman with this apparatus for ether was not a fair test. The patient was difficult to etherize at best, and seeing that, I used the towel. I had occasion to try it again for a smaller operation, and it answered admirably. In answer to Dr. Morton's remark about the unequal supply of vapor and air, I would like to call attention to the fact that this stopcock, if adjusted properly, will give a continuous current of air. I think Dr. Morton's plan of giving ether better than the towel. I heartily indorse Dr. Robert's statement that there is often not sufficient care and attention given by the anæsthetizer to the work in question, and can feel certain the operator can work with greater freedom when the mind is at rest in that direction. I think there is room for improvement in the methods of administering both ether and chloroform.

The Polyclinic.

PHILADELPHIA HOSPITAL.

(Service of Dr. Roland G. Curtin.)

A CASE OF LATENT RHEUMATIC ENDOCARDITIS.

THE patient whom I present to you to day is one of unusual interest. His history is as follows: He has been following the occupation of a stevedore, and after exposure to wet, he began to complain of feverishness and pain in his joints, which soon began to swell. Before admission to the hospital he was confined to bed for several days. Since his reception into the hospital he has had a constant elevation of temperature. His right knee and left ankle have been hot, swollen, and painful. I carefully examined his heart, and found the sounds perfectly normal.

One week later (two days ago), I listened again to the cardiac sounds, and found a prolongation of the first sound over the mitral area. To-day I find a still greater change at the same place, the change amounting to a slight murmur. Now this sign has crept in without any of the usual symptoms of endocarditis, such as increase in the temperature, dyspnoea, pain in the chest, or throbbing of the arteries, or any tumultuous action of the heart. These are the symptoms which are usually associated with acute endocardial trouble, occurring in the course of an attack of rheumatic fever. In this particular case the disease has

crept in without a single symptom, and with but one physical sign, namely, prolongation of the first sound over the mitral area. Dr. A. Ernest Sansom, in his Lettsomian lectures, calls attention to this early physical sign as an important evidence of endocardial inflammation. Without this physical sign, I would not have suspected any inflammation in the endocardium. You should be careful frequently to examine the heart in rheumatic fever, for early treatment may prevent very serious heart trouble. The case teaches us another lesson. In after years this man may be asked whether he has ever had rheumatic fever; and further interrogation as to whether he had, during the attack, any pain in his chest, shortness of breath, and palpitation, would bring from him an answer in the negative. To day I find that there is a little increase in the temperature, and the pulse is slightly increased in frequency. The probability is that this new inflammatory condition at the mitral valve has been the cause of these slight changes occurring two days or more after the local trouble began. Dr. Van Gasken has taken four pulse tracings of the radial artery. They are all of the same character, indicating that the heart is performing its functions properly, notwithstanding the slight trouble at the mitral valve.

What should be the treatment in a case of this kind?

The treatment is of two kinds, general and local.

The general treatment he has been under since he has been in the hospital. When he was first admitted he was placed upon five grains of salicylate of soda four times a day. This remedy I would caution you against using for too long a period. You obtain all the good effects possible from this remedy in about four days. It should be then discontinued.

After this he was placed upon an alkaline treatment, consisting of acetate of potassa, sweet spirits of nitre, and liquor potassa citratis. The sweet spirits of nitre was put in the mixture to aid in the elimination of the irritant from the blood, which causes the fever and inflammation. The local treatment is principally counter irritation. First, a strong mustard plaster, followed on the second day by a good large blister over the cardiac region. Later on, the general treatment will be full doses of iodide of potassium. This has a two-fold effect after the first active symptoms:

1. It is an anti rheumatic.
2. It will have a beneficial effect upon the inflammatory deposits, hastening their absorption and cure. In convalescence from acute articular rheumatism, wine of colchicum root is beneficial, and also in cases of sub-acute rheumatism. In the acute stage it has no perceptible effect. What direction shall we give our patient when he leaves the hospital? He should not follow an occupation which will expose him to cold and dampness, for he might bring on another attack of rheumatism, which might prove fatal, through his already damaged heart. He should avoid an occupation calling for great activity or heavy labor. His heart will be unable to cope with such work. He will be left with an alteration in the cardiac valves which will call for increased strength of the left ventricle, which will in time become hypertrophied, in order to enable the crippled heart properly to perform its functions. As the man grows old, and the infirmities of life increase, he will be subjected to new dangers. The principal one is fatty degeneration. This will weaken the muscular tissue of the heart, for, instead of muscular fiber, we will have simply a row of fat globules. As this change goes on the heart will become weaker and weaker, until symptoms of heart failure gradually present themselves.

The blood is slowed, cyanosis, dyspnœa, palpitation, dropsy, creep in and generally end the scene. This is the history of the end of most of these cases. Sometimes life is ended by the patient succumbing to acute illnesses, the weakened heart being the cause of the fatal termination.

NURSERY POWDER.—To cure severe chafing or intertrigo, use:

R.—Camphoræ..... ʒij.
 Acid carbolic..... gtt. xv.
 Creta precip. (English)..... ʒij.
 Zinci oxid. pulv..... ʒij.
 Oil neroli..... gtt. v.
 Oil rosæ..... gtt. ij.

M.—Rub the camphor to a fine powder in a mortar, using alcohol to reduce it, and mix the other components thoroughly; sift through bolting cloth of one hundred meshes to the inch.

INTERMITTENT FEVER.—W. R. D. Blackwood, M.D., Philadelphia:

R.—Quinia sulph.,
 Cinchonidia sulph..... āā gr. cxx.
 Ext. cannabis ind.,
 Ext. belladonna..... āā gr. xv.
 Piperine..... gr. xxxij.
 Acid arsenious..... gr. iij.

M.—Et in pil. No. 60. div.

Sig. One four times a day.

PRURITUS.—Dr. Brubaker recommends the use of the following preparation for pruritus:

R.—Acid hydrocyanic, dilut. fʒij.
 Sodii borat..... ʒj.
 Aquæ rosæ. fʒviiij.

M.—Sig. Use as a lotion.

TURPENTINE IN POST PARTUM HEMORRHAGES.—When ordinary means have failed a piece of linen saturated in turpentine, introduced into the uterine cavity and compressed against its walls, excites contraction of the womb and instant arrest of the bleeding.—*Ex.*

ECZEMA.—Unna recommends the following application for the relief of obstinate eczema of the scrotum and anus:

R.—Iodoformi..... ʒii-iv,
 Zinci oxid. ʒiss.
 Aq. calcis,
 Ol. lini..... āā ʒiss.

M.—Sig. For external use.

—*Med. Record.*

CHARLES H. MERZ, M.D. (*Med. Age*), describes a case of successful trephining for traumatic epilepsy. The patient, now eighteen years old, when a boy of eight was kicked by a horse. He lay comatose for ten days, but gradually recovered with considerable loss of mental power and change in disposition for the worse. About a year before the operation, he began to have epileptic attacks, which gradually became more frequent. The surgeon found a depressed fracture near the posterior superior angle of the left parietal bone. Two disks of depressed bone three-fourths of an inch apart, an inch in diameter, were removed with the intervening bone. The wound healed without any unpleasant symptoms, and up to the time of reporting, eight weeks after the operation, the patient was free from attack.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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A. E. ROUSSEL, M.D., French Exchanges.
W. F. HUTCHINSON, M.D., Italian and Spanish Exchanges.
HERMAN MARCUS, M.D., German Exchanges.
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THE REFLEX CLUB.

THE annual meeting of this able and progressive body lately took place. The proceedings were all of much interest, but especially so was that portion which related to the patient who appeared before the Association last year.

It will be remembered that the patient referred to was a woman of some thirty years of age, mother of three healthy children. She was a woman in the middle walk of life, wife of an artisan, of well-proportioned figure, and apparently in good health and strength, both mentally and bodily. She was, however afflicted at irregular intervals with severe headaches, and it was for this trouble that one of the members, who had failed to relieve her, brought her before the Club for diagnosis and suggestions as to treatment. Here the trouble began. All agreed without dissension, or, indeed, without examination of her head, that the pain was of reflex origin, but no two of the learned gentlemen could agree as to seat of irritation. Each member, as we might expect, traced it to that portion of the body with the diseases of which he was especially familiar. The discussion finally grew so warm that some of the members were forgetful enough of the dignity of the proceedings to exchange unpleasant personalities. This conduct was promptly checked by the president, however, who proposed as a compromise a plan that was immediately accepted. It was this: The patient was to be treated by each member in turn, according to his own diagnosis, the successive treatments to continue until either the headache or the patient should disappear. The order of members was decided by lot, and the first lot fell to Dr. Fallopius. This distinguished gynecologist had at once taken the patient to his private hospital, where she might have the best hygienic conditions. He had of course maintained that the headache was entirely due to reflex irritation from uterine or ovarian trouble, adding in support of his claim many similar cases which

he had cured by proper treatment of the affected organs. A careful bi-manual examination showed the uterus and ovaries to be of natural size, and in their normal positions. There was no undue tenderness of either of these organs or of the neighboring viscera. Her menses, as well as her bowels, were regular.

Not finding the trouble in this manner he decided on an exploratory incision, trusting he might then find the cause that had thus far eluded him. An additional motive in operating was the desire he had to reach an even two hundred abdominal sections before a certain date. He was compelled to acknowledge to the Club, however, that even his critical and experienced eye was unable to detect anything abnormal, either in tubes or ovaries. But as he had gone thus far, he had concluded it best to remove these organs, as the woman would thus be assured freedom from the danger of cystic ovaries or pyosalpinx for the remainder of her life, and he had accordingly done this.

The woman had next been taken in charge by Dr. Strabismus, of New York, who had strenuously maintained that the headache was a reflex irritation of the fifth pair of nerves, due to ocular strain, and had suggested muscle cutting as the remedy. A careful test of her refraction showing her to be emmetropic, he at once proceeded to relieve the headache in the way he had mapped out. The external and the superior recti were divided and set slightly forward, whilst the internal and the inferior recti were moved a corresponding distance backward. The superior and the inferior obliques had their attachments so altered as to rotate the eye a little outwards on its horizontal axis. Both eyes were treated in the same way. Despite his labor, however, the headache had still continued, and, although the eminent ophthalmologist insisted that the alteration in her optical axes simply gave the woman a coy and roguish look, others, not in sympathy with his methods, hinted rather broadly that, to their eyes, the patient was disfigured by a double squint upwards and outwards, whilst, in addition, she was burdened by a constant expression commonly known as "sheep's eyes."

Dr. Caustic, who had agreed with the last gentleman in assigning the pain to reflex irritation of the fifth, had received the third lot. But, being a throat and nose specialist, he had looked there for the mischief, and had found it. In maintaining his contention before the club, he had instanced many cases of headache in patients whose nasal cavities exhibited not as much abnormality as he found here, and who had been cured by treatment directed to the proper organ.

After removing, with the galvanic snare, several small polypi, the size of split peas, from the roof of the left narium, he applied the same instrument to a slight hypertrophy of the right middle turbinated. The septum being somewhat deviated toward the left, he perforated it with three different figures of the nasal punch, and forced the septum toward the median line by means of graduated bougies. He had also snipped off a piece of the uvula. This little operation he could hardly say was necessary;

but his new invention for this purpose, which he now had the pleasure of showing to the Club, performed the operation so quickly and neatly that he felt no defense of his action called for.

As the headache still persisted after these measures, he was forced to explain it by some trouble in the frontal or sphenoidal sinuses—places that he could not reach.

By this time the woman had grown so weary of operative treatment that she declared had she known what was going to happen to her, not one of them should have touched her; but, for a consideration, was finally persuaded by Dr. Pedibus, the well-known orthopaedic surgeon, to submit herself to his treatment.

After finding that her right leg was one millimeter shorter than the left, he had traced her headache at the previous meeting to spinal irritation, the result of asymmetry. He now remedied the asymmetrical condition by having an extra sole put on the right shoe, of the required thickness; and, finding in addition, that smart, or, rather, heavy, blows on the right bended knee produced slight pain in the hip-joint, he suspected trouble there. He accordingly applied counter-irritation, in the shape of the actual cautery, at five different points, and was debating the advisability of dividing a muscle or two, when the woman vowed he should not come within ten feet of her with another instrument.

Dr. Rectus, of Chicago, had the greatest difficulty to persuade the patient to yield herself to his treatment. She had grown wary and suspicious of the whole Club; but his eloquence finally prevailed.

He had handled the theories of the other gentlemen with great freedom and considerable sarcasm at the previous meeting, demonstrating, at least to his own satisfaction, that a diseased condition of certain pockets in the rectal mucous membrane was the cause of all the trouble. As soon as the woman had entered his hospital he promptly etherized her, dilated the sphincter ani, inserted a probe into the offending pockets successively, and dissected out fifteen of them—all he could find.

Unfortunately, his dilatation of the sphincter had been so severe that the muscle proved to be permanently paralyzed, and the woman has consequently since suffered from incontinence of the feces.

This mishap capped the climax. She was so irritated that no persuasion could prevail on her to allow another member of the Club to treat her, although a number of the gentlemen were thus deprived of putting their theories to a practical test.

N. B.—Since writing the above, we have learned that an ordinary country practitioner suggested that the woman might have rheumatism of the scalp; although a similar suggestion last year provoked much merriment among the Reflex Club. However, the physician alluded to treated her for this affection, and the headache promptly disappeared.

E. B. SANGREE.

THE next International Medical Congress is to be held at Rome, 1893, and preparations for it are already engaging the Italian professional minds.

Annotations.

THE *New Nation*, Bellamy's paper, says that no society can be called rational, in which it is possible for a baby to inherit \$150,000,000, for the mere trouble of being born. This is apropos of the latest Astor scion, a family that bids fair, in conjunction with the Vanderbilts, to buy up the world in the course of time, and fence the rest of us out.

C. H. MOORE, M. D., of Columbus, notes an interesting case of quinine idiosyncrasy. A woman was found by him, three hours after taking a five-grain dose of quinine, lying as if dead. Pulse could not be detected at wrist, and heart beat very faint and slow. Eyes wide open and glassy, pupils dilated. She recovered in half an hour by the exhibition of brandy and belladonna.

THE *London Lancet* in discussing the subject of life insurance and the medical profession, complains of the maze of figures in which insurance companies usually conceal the bonus promised.

We can sympathize with any one who has tried to comprehend an insurance company promises from the study of its figures. As our contemporary says, "None but an actuary can do it."

This mystery, probably, is of service to the companies, else they would show the applicant figures that are intelligible.

A number of the English insurance companies have made a concession to medical men in the shape of a rebate of the ordinary commission, in case the applicant applies directly to the office.

AN OPENING FOR AN ENTERPRISING PHYSICIAN.

Through the kindness and wise discernment of Postmaster Zumstein we have received the following postal card:

"To Any Reliable Dr.
City.

Cincinnati, Nov. 22, 1891.

To Any Dr. that wants to put a good salve on the market Iv the Best that can Be Put on the market and can be Sold on a garentee it is good for Man or Best can be put up at the cost of 10 cts on the Dolar I havent the money to put it on the market if you want anything of the kind pleas address me at —E 5th st city, J. H."

We think it but proper that our readers should receive the benefit of this munificent offer, by which the thorny path of affluence may be robbed of its prickly terrors; and if any of them feel disposed to accept of his generosity, we will cheerfully supply the missing links in address and name, which for the present we withhold out of consideration for the natural modesty, and desire to avoid the publicity of the press, which the nature of the offer and the manner in which it is made known would indicate in the writer.

—*Cincinnati Lancet Clinic.*

WE have no doubt, that if some enterprising doctor will simply swear that the words of the salve maker are true, putting his oath into a little better English, he will reap his reward, provided, he advertises enough.

PREPARING FOR A VOYAGE.

THERAPEUTICS having thus far failed to give immunity from sea-sickness, or afford the sufferer relief, mechanics steps in. A. G. Greenhill offers a suggestion that may prove of some use. He advises a sort of acclimatization. In short, he advocates the manufacture of a full-sized ship section,

which is so arranged that it may sway back and forth and from side to side, after the manner of *bona fide* vessels on the briny and unstable deep. It is his intention that prospective passengers should drill themselves for an hour or two each day, for a short time, before venturing aboard, believing that they may thus grow so accustomed to the motion as not to be at least very much affected when they finally commit themselves. He urges that people would be likely to avail themselves of this plan because there would always be the comfortable thought that if things grew too unbearable, they could descend at will to the solid ground beneath, a thought, alas! far, far from the wave-tossed wretch on the mighty deep.

Letter to the Editor.

POISONING BY BUCKEYE.

A COLORED GIRL, aged two and a half years, ate an unknown quantity of black buckeye. "A large quantity of grease was given to her," and immediately afterward lockjaw set in. Powdered ipecac and a feather pushed down her throat failed to empty the stomach. There was no vomiting. Child was apparently unconscious; respiration slow. Salt and water was injected into bowels; ether into arm. Chest was rubbed with turpentine, and artificial respiration kept up without any result, except prolonging the death struggle. Child lived about two hours.

C. H. DONNELLY, M.D.

UTOPIA, UVALDE COUNTY, TEXAS.

Book Notices.

MANUAL OF PHYSICAL DIAGNOSIS. By JAMES TYSON, M.D. pp. 133; 17 illustrations. Philadelphia: P. Blakiston, Son & Co., 1891.

The work presents, in a clear but concise form, the teachings of the day on this important branch of medicine. The author follows, in the main, the teachings of Flint, although due recognition is awarded to later works on the subject. Gerhardt's change of note, illustrating the shape of cavities, is clearly noted in a few words. In the chapter on heart murmurs, the term "inorganic" is properly objected to as misleading, and "functional" or "accidental" is used instead. Students will find this work particularly useful in their early studies in physical examination.

HISTORY OF CIRCUMCISION FROM THE EARLIEST TIMES TO THE PRESENT; Moral and Physical Reasons for its Performance, with a History of Eunuchism, Hermaphroditism, etc., and of the Different Operations Practised upon the Prepuce. By P. C. REMONDINO, M.D. Philadelphia and London: F. A. Davis, Publisher, 1891. Price: cloth, \$1.25, net; paper, 50 cents, net.

We have read this book with much pleasure. The author has a breezy and interesting way of writing, that amuses while it instructs. He has gone to great pains to discover everything of interest with relation to the performance of circumcision, both historical, religious, hygienic, and, more strictly medical, making a strong plea for the more general sacrifice of an unnecessary and frequently hurtful appendage. He believes that the prepuce was probably of good service to prehistoric man, in protecting the glans from injury, when our ancestors were howling naked savages, and had quickly to shin up a rough-barked tree

to escape the engulfing jaw of some huge carnivora, or anon, as he sat on his haunches on some sun-baked sand-hill, whilst ants, gnats, and other annoying insects, crawled over his hairy skin. Those days having, happily, gone by, he thinks that the usefulness of the prepuce, along with that of the vermiform appendix, the plantaris, the muscles of the ear and nose, has also passed away, and that it should no longer encumber the ground—we mean the glans.

The Medical Digest.

J. HUGGINS, M.D. (*Alabama Med. Age*), relates three cases of tetanus successfully treated by large doses of gelseminum, and four others by the following method: A warm mush poultice, made of a decoction of red oak bark, and large enough to wrap the patient in from head to heels, was the only medicine. He was kept in this until recovery took place.

J. B. MATTISON, M.D., in a paper read before the County of Kings Medical Society, makes a strong plea for the more general use of cannabis indica, a drug that has rather fallen into disuse. His experience has been mainly with opium habitués, in the treatment of whom he has found cannabis indica most admirable. He says:

My experience with hemp covers more than a decade, many cases, and several pounds of fluid extract. It is proper to state that these cases have been solely habitués or ex-habitués of opium, chloral of cocaine. In these, often, it has proved an efficient substitute for the poppy. Its powers in this regard has sometimes surprised me. Both sexes took it, and with some no other drug anodyne was used. One of these—a naval surgeon, nine years a 10-grain daily subcutaneous morphine taker—recovered with less than a dozen doses. My oldest female patient—sixty-four—found its service complete. Its action has varied, as some cases respond more fully. This during the early abstinence time. Later, it has done good in the post-poppy neuralgia, especially the cranial kind, and it has calmed mental pain and unrest.

In some diseases common to women hemp works well. Grailly Hewitt says that in many cases of uterine cancer it allays or prevents pain. Ringer asserts it sometimes signally useful in dysmenorrhœa. West commends it here. Potter states that its anodyne power is marked in chronic metritis and dysmenorrhœa; and Hare thinks it of great value in chronic uterine irritation and nervous spasmodic dysmenorrhœa. Donavan and Fuller claim it of value in migraine and chronic rheumatism; and Mackenzie in hay fever and hay asthma.

In genito-urinary disorder it often acts kindly—the renal pain of Bright's disease; in vesical spasm; retention of urine, and chordee; and it calms the pain of clap equal to sandal or copaiva, and is less unpleasant. The distress of gastric ulcer and gastrodynia are eased by it, and in other and varied neuralgias it serves one well. In some cases of advanced phthisis and other cureless disease it will bring euthanasia by allaying pain and unrest.

Another cause of failure is too timid giving. I am convinced that the dose of books is often too small. The only true way is, once a good extract, push it to full effect. My doses have been large—40 to 60 minims of the fluid extract—overlarge for the non-narcotic habitué; but, as we years ago asserted, habitual poppy taking begets a peculiar tolerance of

other nervines, and they must be more robustly given. Both sexes have taken them—women frequently—with no other effect than quiet and sleep. I think, for many, small doses are stimulant and exciting; large ones, sedative and quieting. They are the outcome of an experience with smaller doses that failed of effect desired. They prove hemp harmless, and they add proof to the opinion of most neurologists that, once a nervine needed, it is often better to give one full dose than several small.

I close this paper by again asking attention to the need of giving hemp in migraine. Were its use limited to this alone, its worth, direct and indirect, would be greater than most imagine. Bear in mind the bane of American women is headache. Recollect that hemp eases pain without disturbing stomach and secretions so often as opium, and that competent men think it not only calmative, but curative. Above all, remember the close genetic relation of migraine relieved by opium, to a disease that spares neither sex, state, nor condition.

Medical News and Miscellany.

PROFESSOR V. HIPPEL, Koenigsburg, has lately reported a successful case of cornea transplantation, a clear cornea resulting.

PROFESSOR REYER, of Gratz, who was formerly surgeon to the Viceroy of Egypt, and whose name is known principally by his surgical treatment of elephantiasis, has lately died.

AN ordinance has recently gone into effect in Berlin which will give the right of way to carriages of physicians driving through crowded streets. In order to distinguish doctors' carriages from others, the coachmen will wear white hats.—*Med. Age.*

THE Emperor of Germany has, lately, undertaken to purify his empire from sexual vice. As there are said to be some 50,000 prostitutes in Berlin alone, the Emperor would probably have found it an easier task to clean the Augean stables; but we wish him success.

A NEW DIGESTIVE FERMENT.—We heard a story on the physician in the south part of this State in regard to the use of Phillips' digestible coco. A traveling man for the coco house visited him and unrolled his tale of woe about the coco, when the doctor broke in on him and said: "See here, now, I have tried your digestible coco, and find that it won't digest anything, and have gone back to old pepsin again."—*Meyers Bros. Druggist.*

A LARGE portion of these advertisements (news-paper ones) are grossly indecent; they thrive on ignorance, and appeal to the immoral and depraved instinct of humanity. I refer to the nasty "female regulator," "errors of youth" and "lost manhood restored" advertisements that fill the papers. But all of them, whatever their appeals, whether to the frailties or infirmities of the reader, seek to divert the demand that must always exist so long as there are diseases, from the legitimate source of supply. They are pirates, robbing both the public and the druggists; the former by deceiving them into paying enormous prices for cheap things, and the latter by forcing them to distribute these nostrums at little or no profit to themselves, and to the detriment of their own business, and crowding all legitimate pharmacy to the walls.—*Detroit Times.*

DR. JOHN B. ROBERTS advocates Egyptian loofah as a clean article with which to scrub the skin before an operation. They are cheap, and can be cut into ten or twelve pieces, each one large enough for use, the cost thus being cheap enough to allow one to throw the piece away after having once made use of it.

It looks very much as if the latest divorce scandal in English high life were simply the result of a union between an exacting and hysterical young woman and a weak-eyed and weak-headed young earl. It is hardly likely that so seemingly harmless a young man could be guilty of a moiety of the enormities charged to him, but a hysterical woman will stop at nothing to gain her point. We should not be surprised to see as additional evidence on the part of Lady Constance Russell that her noble lord killed his grandmother, roasted and ate her heart.

HOW WOULD YOU LIKE THIS?—When a rich man calls in a physician he does not expect that he will be presented a bill for medical services. In fact, no such thing as a doctor's bill is known in Japan, although nearly all the other modern practices are in vogue there. The doctor never asks for his fee. The strict honesty of the people does not make this necessary. When he is through with a patient, a present is made to him of whatever sum the patient or his friends may deem to be just compensation. The doctor is supposed to smile, take the fee, bow and thank his patron.—*Canadian Druggist.*

THE subject of the removal of garbage is receiving a good portion of discussion. Don't remove it, any portion of it, so the smell of its decay will come back. It is a big undertaking for a big city to remove its garbage in such a way that it will give no offense. Dumping it in a water-course, on a lake or sea, is not getting rid of it to all purposes. In the first case it will wash down and become a pest about another town. In the second or third it will wash back to shore and breed a pestilence there. The surer way to handle garbage is to destroy it. It can then hurt no one, as it has no existence. Piled up in almost any place, it will find some way in giving off the evils of its decay to the injury of some one. Destroyed, placed out of existence, it is gone and there is nothing left. No one will be offended by it, and no means are left whereby it can come into the home or whereabouts of the people. It may not be the best way to serve garbage, but it is a safe way, and at the present time we know of no other that will prove any better. —*Sanitary News*

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H. W. KELSEY, Manager,

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The Times and Register.

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Clinical Lecture.

IRREGULARITY OF THE HEART-BEAT.

By PROF. DR. NOTHNAGEL,
VIENNA.

(Translated by Herman D. Marcus, M.D.)

PAIENT fifty-five years old; brewer; complains of palpitation of the heart, asthma, and swelling of the lower extremities.

He claims to have had pneumonia forty years ago. During his thirtieth year he had fever, which repeated itself a few times every second day. After this fever he remained in best of health till 1882, when again he experienced an attack of fever, on which occasion his physician diagnosed a splenic tumor. Since then he was always well. His present complaint dates since last New Year, which complaint (palpitation and asthma) was aggravated by quick walking or on taking alcoholic drinks. Towards the middle of February the suffering became so intense as to necessitate his going to bed. At the same time oedema of the lower extremities made its appearance, which, though changing in its intensity, still remains.

He complains now of oppression of the chest, cough, with tenacious sputum, and palpitation on over exertion. For fourteen days his abdomen has increased in circumference. No specific history.

The objective examination of our patient shows free sensorium. The facial expression shows suffering; the color is red, verging slightly towards cyanosis.

We notice on the cyanotic lips small capillary ectasis. On the whole body oedema is apparent.

Whenever you find a patient with general dropsy and ascites, with cyanosis and all such subjective complaints as shown by our patient, your first thought would con-

nect such a condition with an affection of the lungs, complicated with a stasis in the heart, or a direct affection of the heart, especially valvular insufficiency, or a change in the heart-muscle, because these forms of heart disease most generally produce oedema.

The urine of our patient is of a reddish-yellow color, and owing to a sediment (consisting of urates) very turbid; the specific gravity is pretty high (1.028); reaction acid. The microscopic examination disclosed red and white blood corpuscles, uric acid crystals, but no cylinders; a state which we find in engorged kidneys.

The skin is dry and warm, between 97½° and 98°F.

The radial artery is not rigid; moderate filled; undulation pretty high; tension below normal. On accurate examination we find that the pulse has not the usual rhythm; in fact, it has the character of an unequal pulse.

This condition points undoubtedly to a disturbed heart lesion; not a simple nervous disturbance, but a positive lesion of the muscle. We also find a different agitation in the heart region, and this fact, in connection with the subnormal tension and the general dropical appearance, permits us to conclude that we have to deal here with dropsical heart, verging to an insufficiency.

Auscultation shows in the region of the apex two dull, hardly noticeable, sounds. No distinct murmur is heard. We find the same condition over the pulmonary artery, while nothing can be heard over the aorta.

The question to be decided is, Whether such a state will allow us to diagnose a valvular insufficiency. The positive lack of murmurs, the deadened sounds over most all cardiac orifices, and the irregular pulse, all these conditions point to an affection of the heart-muscle itself. Even the dropsical phenomena, the

strong agitation of the chest-wall may be classified as symptoms of an insufficiency of the heart-muscle. We must also think of an independent affection of the heart, without any valvular complications, which may lead us to diagnosis this as a positive hypertrophy of the heart. An hypertrophy due to a primary disease of the lungs must be excluded, and whatever disturbances we may find in the respiratory apparatus may be considered as secondary to a stasis of the heart. We find an hydrothorax, but otherwise pure, loud vesicular breathing. Neither can we diagnose this as *concretio cordis*, because we have no objective symptoms, and we are, therefore, forced to diagnose this case as a mixture of hypertrophy and fatty degeneration, which state may be explained by our patient's mode of living.

While finding in persons who are doing heavy, manual work, such as miners, mostly a pure hypertrophy of the heart muscle, we will observe in persons who follow an occupation similar to that of our patient an hypertrophy which is complicated with fatty heart. Just as in other diseases of the heart-muscle a time comes when the heart-muscle becomes insufficient, we also find in this disease the same state, which is characterized by such symptoms as you observed in our patient.

A few words in regard to arrhythmia of the heart would now be in order, because this point is of the utmost importance in practice. Irregularity of the heart is a phenomena which may appear under different conditions.

You know, gentlemen, that in accordance with our physiological knowledge, we consider the action of the heart as purely automatic, which, independent of innervation, is to be considered as an action of the muscular protoplasm; that the regular consecutive contractions of the heart is a peculiarity of the cardiac muscle.

The rhythm of the heart-action may be disturbed and re-established in two ways: First, through regular contractions of the muscular tissue itself, on account of its peculiarity; and, secondly, the rhythm may be disturbed through degeneration of the substance of the cardiac muscle.

Experiments conducted by Von Kisch, Hiess, and Romberg have shown that even in extreme cases of arrhythmia of the heart no anatomic changes occur in the cardiac ganglia; though such changes occur in cases in which no arrhythmia existed. Therefore, degeneration of the cardiac ganglia can be considered as cause of arrhythmia; but such a condition must not necessarily exist. If, then, in such a case, the conditions are thus that innervative disturbances of the nerves coming from the outside to the heart are excluded, then we are forced to accept the supposition that these cases are due to a disturbance of the automatic contractions of the heart-muscle.

This, then, convinces me that, etiologically, two forms of heart arrhythmia exist: First, such which are caused by disturbances of the histological, chemical, and molecular structure of the substance of the myocardium; and, secondly, those which are caused by changes in the nerves and cardiac ganglia.

You may now understand that we may find an arrhythmic pulse in heart diseases, and that often, though not always, arrhythmia is caused by a disease of the cardiac muscle, be it in an idiopathic case, such as fatty heart, or in an idiopathic hypertrophy, the so-called "*Arbeiterherz*" (laborer's heart), or in a mixture of a fatty heart and hypertrophy; or, again, the cause may lie in an affection of the cardiac muscle, which will secondarily cause hypertro-

phy, such as in a case of valvular insufficiency. In all these cases a time may come when the nutrition of the heart-muscle is interfered with and the contractions become irregular. There are cases of heart disease in which only chronic myocarditis can be diagnosed complicated with marked arrhythmia, without being able to find any symptom of weakness of the heart. If arrhythmia of the heart, during the state of compensation, is found, then we have a positive sign that other causes besides valvular insufficiency exist.

The same may be said of an idiopathic hypertrophy or a "Muenchner" heart. The pulse, in such cases, is perfectly rhythmical as long as the heart-muscle has sufficient strength; but when dropsical symptoms make their appearance, then arrhythmia becomes a marked symptom. If I should find, in a case of idiopathic heart disease, arrhythmia without dropsy, I would be forced to diagnose it as "callous" myocarditis.

We may also find cases which are of the utmost importance—cases of arrhythmia without any anatomical changes in the heart. The patient becomes very frightened at the sudden appearance of this phenomenon, and the physician, unable to explain the condition, will diagnose it as a very dangerous disease. Such a conclusion is certainly very erroneous, as we may find a form of arrhythmia without any apparent anatomical causation—the so-called arrhythmia *Katx-ochen*.

We distinguish different forms of arrhythmia: First, the simple intermission in the pulsation. In such cases you will find, though otherwise normal, that one pulsation will lapse at certain intervals. On auscultation you will notice that the heart sounds follow each other regularly, but from time to time the sound which is synchronous with the contraction of the ventricles (systolic sound) becomes weaker, because the contraction is not of sufficient force to drive the blood to the peripheral arteries. The consequence of such a case is that the pulsation lapses and you find a rhythmical heart-action with an arrhythmic pulse. This condition we designate deceiving (frustrane) contraction of the heart. Such an arrhythmia is no proof of difficult or irregular innervation of the heart, but is caused through the insufficient muscular action in a certain period.

Contrary to this apparent arrhythmia, there are cases in which a true intermission in the contraction of the heart, as well as in the pulsation, occurs. Such conditions are caused through an acceleration in the contraction of the heart followed by a normal state, or a contraction may actually lapse, so that we have to deal then with a true intermission: the undulation which then exists is perfectly irregular. Then, again, we may find cases in which the arrhythmic condition occurs at regular intervals; this is to say, that after a certain number of normal pulsations, a few short pulsations follow.

Bouilland has already shown us that there exists a form of arrhythmia in which the pulsation is of different duration and intensity. Bouilland calls this condition *delirium cordis*, as the heart seems as if in a state of delirium.

To return now to our patient we find in his case an extreme irregularity; I should like to accentuate the fact that if we find an affection of the cardiac muscle as in this case, an arrhythmia occurs which resembles generally the condition of the patient. The simple intermission is hardly ever found in such a case.

Differently is the arrhythmia occurring in another form which is of the greatest practical importance

because, disturbing the patient, it has a tendency to confuse the physician, forcing him to prescribe unsuitable remedies; this is a condition of arrhythmia without heart disease.

We find very often, an arrhythmic pulse, without the presence of any heart lesion, and the question is when such a phenomenon occurs. The conditions for this state are manifold and changeable and I shall only describe to you the most important.

I beg to draw your attention firstly to the fact that we find an arrhythmic pulse on exciting the pneumogastric, for example in cerebral diseases. We find this condition as a symptom of meningitis, of apoplexy with hemorrhages, in cerebral tumors or abscesses, in diseases of the cranial cavity. The arrhythmia in such cases is a simple intermission. The pulse is intermittent, some pulsations lapse and this is the dreaded and dangerous omission of the pulse in children who suffer from meningitis, cases in which an absence of all symptoms, but the presence of this one symptom, leads us to diagnose meningitis. Gentlemen, you would do well to accept it as a rule, to always diagnose a case (in children) as meningitis whenever this peculiar arrhythmic state is observed. Still we may find exceptions to this rule, but only very rarely.

More often than through excitation of the pneumogastric we may find the causation in reflex irritation from the different parts of the body. You undoubtedly are aware of the change in pulsation, which is caused by a blow on the abdomen, and this phenomena is explained by the fact that the pneumogastric nerve is excited to a marked degree through reflexes, causing paralysis of the heart and death. If the paralysis is not of sufficient intensity to cause death, then the activity of the heart is more or less checked, and an intermission of the pulsation is the result. But not only external irritation of the vagus nerve will have this effect on the pulsation, internal excitation may cause this change, such as through the action of intestinal worms or other parasites in the intestines.

We will also find this peculiarity in the pulsation, with old people. You will sometimes notice in persons between fifty and eighty years an intermittent pulse without being able to diagnose any special heart disease. On examination you may find pure sounds at all cardiac orifices, the apex beat normal, the cardiac dulness inside its normal limits, no change on the peripheral arteries, in fact you are unable to diagnose any lesion through objective examination; still the patient will complain of painful sensations in the heart region, sensations which may resemble angina pectoris. Some individuals experience a pressure over the heart, and these sensations will return to them time and time again for many years. You will understand that these subjective complaints must have their etiology, even if you are unable to prove the fact clinically, this cause lies in a disease of the cardiac muscle. This disease is due to sclerosis of the coronary arteries.

This degeneration of the cardiac muscle, this myocarditis is then the cause of the disturbed heart action. This explanation has been proven to be feasible by the fact that sclerosis of the coronary arteries is of very common occurrence in old persons. Another form of arrhythmic heart action finds its causation in poisoning.

One form of poisoning which I desire to mention is the one caused by digitalis. For such a case arrhythmia appears as a direct symptom, which may be easily proven by changing the therapeutic.

Another form of poisoning which causes irregular heart action is nicotine poisoning.

I have told you, at different times, that some people are positively injured through smoking. The injury may appear in three different forms:

1. As a disturbance of digestion.
2. By affecting the eye, causing disturbance in vision, ambliopia, and even amaurosis.

But the majority of cases show the nervousness of tobacco smoking in the alteration of the heart action.

Another important cause of cardiac intermission lies in an abnormal condition of the digestive tract. You will easily comprehend this cause when you remember how closely the heart and stomach are connected, that the pneumogastric is the nerve leading to both organs.

Some persons show arrhythmia when suffering from an acute gastric catarrh or chronic dyspepsia; others, again will experience arrhythmic sensations by simply overloading the stomach.

You will undoubtedly understand the necessity of a correct therapeutic in such a case, your whole object lying in the cure of the causation, viz.: relieving the gastric complaint.

Disturbances of the intestinal tract must be also classed first as an important cause in the etiology of arrhythmia. All such cases are influenced through reflex action, and are purely of a nervous type.

Arrhythmia is also quite a frequent symptom during a crisis in the course of acute fever.

If in a case of croupous pneumonia, erysipelas, typhoid fever, and others, a sudden fall of the temperature occurs, and the patient becomes free of fever, you will often notice an arrhythmic pulse. Such an arrhythmia is only slight and of short duration; the pulse becoming normal in the course of two or three days. Buerger claims that this arrhythmic condition occurs in every crisis of pneumonia, an assertion which I can not indorse fully. Sufficient to say that it occurs in a great number of cases. The cause of such an arrhythmia lies in the malnutrition of the heart during the fever. The heart, owing to its malnutrition caused through the poisoning of the existing bacteria in the blood, is not able to exert the same amount of energy as a sound heart.

So long as the stimulus of a high temperature is present, the heart keeps up; but as soon as the temperature falls, as during the crisis, then the weakened heart will produce arrhythmia.

We find irregularity of the heart in the course of an acute fever, as in typhoid fever. We will very often notice, during the second or third week, an arrhythmic pulse. Such a condition may be put down as a signum enalominis, as it proves that the heart suffered in its nutrition.

Another cause is found in psychic affections. We will notice that when a chlorotic or anæmic patient becomes mentally excited arrhythmia follows the excitement.

Another point in the etiology of this affection lies in an excitation of the cutaneous nerves resulting in a contraction of the peripheral vessels, such as is caused by swimming in cold water.

You will now fully understand the value of correctly recognizing the causation of this phenomena. You must remember that arrhythmia may be purely functional in its character. In such cases the treatment of the cause will cure the affection. Again, you may have cause to treat the heart directly, in which case digitalis, strophanthus, convallaria and adonis vernalis must be used.

Original Articles.

THE USE OF THE GALVANIC CURRENT
IN ARTICULAR INFLAMMATORY
EXUDATIONS.

BY M. A. CLEAVES, M.D.

ON the evening of June 7, 1891, I was called to see M. M., aged fifty-two years; widow; mother of five children, who was suffering from a sub-acute articular rheumatism of the right wrist and hand.

Upon inquiry, I found that she had had an attack of inflammatory rheumatism twenty-seven years before, affecting all the articulations of both lower extremities, beginning with the knee; also of left hand and wrist.

She was then confined to bed for three months, and was more or less crippled for a year afterward; but ultimately made a good recovery.

There was no return of the trouble until in February, 1891, when the snow came through the roof of the house into her bedroom, rendering it very damp and chilly.

She developed rheumatism of a sub-acute inflammatory type in the same articulations of the lower extremities as before.

Owing to reduced circumstances, no physician was called in; but she bathed in bran-water, and took magnesium sulphate every morning, as she had been directed to do in the attack twenty-seven years before.

After a month there was complete recovery, so far as the legs and feet were concerned; but she had for a few days a rheumatic stiffness of the neck, and then, about the first week in April, her right wrist and hand became affected.

She pursued the same course as before, with, in addition, occasional applications of tinct. of iodine; but there was no abatement of the trouble.

At the time of my visit she had been unable to use her hand for two months. (During that time there had been pain, heat, swelling, and impaired mobility.)

Upon examination, I found the hand swollen to about twice its normal size, the infiltration of tissue being especially marked over the carpal and metacarpophalangeal articulations, the pitting or pressure plainly indicative of the fluidity of much of the effused material.

There was a decided increase of local temperature, much pain—especially in wrist and in metacarpophalangeal articulations of thumb and index finger, and a very extensive capillary congestion, the skin being of a purplish hue. The carpal and metacarpophalangeal articulations were in a state of extension, while muscular power and sensation were almost lost.

The patient's general condition was not good. There was marked digestive disturbance, evinced by gaseous eructations, distension of gastro-intestinal tract, constipated bowels, an inordinate craving for food, heaviness, languor, and depression of spirits. The latter was so marked that her family feared the development of melancholia, she having passed through a prolonged period of depression several years before.

For the digestive trouble I ordered hot water an hour before meals and, upon retiring, also a laxative, and restricted her diet.

Directed a daily sponge bath in water changing from tepid to cold, as it could be borne. These instructions were strictly followed, and the improve-

ment in digestion and general condition was rapid and gratifying.

The following morning, or June 8, she came to the office for galvanic treatment. Hand in the condition above described.

Placing the anode at the sternum, I applied the cathode successively (using the ordinary hand electrodes wrapped in absorbent cotton) to the dorsal aspect of the wrist and metacarpophalangeal articulations for fifteen minutes. The applications were stable, and current strength, 10 m. a. Immediate result—relief from pain during séance, diminution of heat, and increased mobility.

The treatment was given daily for one week, then at intervals of two or three days for six applications more, making in all thirteen séances—of from fifteen to twenty minutes each—in which, with the same arrangement of electrodes, 10 m. a. of current were given.

Continued relief from pain, decreased temperature, increased mobility, with ability to partially flex the fingers, followed the second treatment.

After the third a more marked gain in all these particulars, and especially relief from the capillary congestion. Mobility of articulations of the thumb greatly increased.

Upon her return for the fourth treatment, she delightfully told me that she had begun to have normal sensation in her fingers, and that she had helped to wash the dishes. At that time her general condition was greatly improved; sleep continuous and restful, and the morning found her feeling refreshed and energetic. Appetite was more nearly normal, tongue clean, bowels regular, skin clearer, and, to use her own expression, she was "splendid."

She improved daily, and on the 14th of June (I find recorded in my case-book) hand very much smaller, no heat, no pain, circulation good, sensibility increased, less stiffness, flexion good, and more power. Is helping with the housework.

On the 15th, one week after the first treatment, she did some sewing—her occupation being that of housewife and seamstress combined—and on the 16th sewed all day, with no bad result.

On the 19th I find recorded her ability to use scissors in cutting out her work, and to lift light weights.

The last galvanic treatment was given June 29, and I find on that day the following record: No infiltration of tissues, and can close her hand with a good degree of power; general condition good.

After the first eight séances there was no regularity in her coming, as her work kept her at home.

After June 29 I gave her—as she could come for treatment—five applications of the faradic current; secondary cathode at sternum, anode to motor points, and labile to arm and hand, 35 cyl. for from five to ten minutes, with the result of increasing muscular power.

In concluding the report of this case I would emphasize the fact that from the fourth day of treatment this patient has used her hand to a gradually-increasing extent in the performance of household duties, and from the eighth day she has sewed more or less every day—ofttimes all day. There is complete recovery of power and mobility, and she is conscious of only a little stiffness on damp days to remind her of her two months of pain and helplessness.

On August 26, 1891, M. Louis, aged fifty-three years; married; native of France; hat maker; since injury peddler, presented himself at the Electro-Therapeutic Clinic of the New York Post-Graduate

Medical School and Hospital, because of partial extension and loss of mobility of right wrist and hand.

The following history was elicited: Thirteen months before he was bitten by a mosquito on the dorsum of the right-hand, which resulted in blood-poisoning. By the third day his hand was immensely swollen, skin almost black, and pain intense, extending up the arm. He went at once to Bellevue Hospital as an in-patient. On the third day, and for three successive days, incisions were made over the dorsum of the hand, and the arm was cauterized in its circumference at about the beginning of the lower third of the humerus.

The disease followed its usual course, relief from pain and sleep being procured for the first three weeks by means of morphine. At the end of four weeks he left Bellevue Hospital with his arm and hand in splint and bandages.

After two weeks, being no better, he went to the New York Hospital, where the apparatus was removed. He continued there for a month as an out-patient. Certain medical measures were adopted which are unknown to me.

From there he went to Dermot Dispensary as an out-patient, and for three months, three times a week, the faradic current was used with one pole on the sternum, the other stable over the hand—séances lasting about five minutes. From this treatment he made slight gain in muscular power.

Upon examination I found this condition, viz.: Partial extension of all the articulations of wrist and hand, save last phalangeal articulations, which were complete. Flexion of the fingers upon the palm left a space of fully two inches between the palmar surfaces. Flexion of the wrist was possible to a very limited extent, scarcely changing the hand from its parallel relation with the forearm. In stretching the thumb and index finger to their fullest extent in both hands, the right lacked about two inches of equaling the left. The thickening was especially marked about the carpal and meta carpo-phalangeal articulations. Pain was complained of on the radial side of the wrist, just about the motor point of the median nerve. There was great loss of power and an inability to grasp and hold things. The muscular movements necessary to use scissors or a knife in cutting were impossible.

Diagnosis.—Exudations about articulations of wrist and hand, and sheaths of tendons, from the extensive cellulitis incident upon the sepsis.

Plan of Treatment Resolved Upon.—Interrupted galvanic current. Application gauze wire electrode, three by four inches, covered with absorbent cotton, over spinal region of brachial plexus and attached to anode. Cathode electrode, cotton-covered wire one and a half by eight inches placed successively over carpal, metacarpo-phalangeal and phalangeal articulations; current strength as could be borne. Length of séance from fifteen to twenty-five minutes.

To date there have been eleven treatments. The current strength has varied from 10 to 30 m. a., and has averaged 20 m. a. each séance. The time has varied from ten to twenty-five minutes, and has averaged twenty minutes for each treatment.

First séance, immediate result, a noticeable increase in mobility of metacarpo-phalangeal, and first phalangeal articulations with relief from pain. After second, continued pain in mobility of carpal as well as above articulations and ability to bring index finger in contact with thenar eminence. After the fourth séance could bring middle finger also in contact with thenar eminence, and after the sixth he

called my attention to the fact, that whereas at the time of the previous treatment he could still slip his left index finger between the tips of the ring and little finger and the palmar surface of the hand, it was then impossible to get it through.

The gain in mobility and power continues, although the most marked improvement was made during the first six treatments.

Simultaneous stretching of both index fingers and the thumbs leaves a difference of less than one-half an inch in favor of the left hand.

The treatment in this case is not yet completed and we hope for further improvement. He can use his hand in cutting his food for the first time since the injury.

Moritz Mayer¹ has reported a series of cases which are *en evidence* of the policy of the galvanic current, not only in inflammatory exudations about points and sheaths of tendons but in dissipating, as well, hypertrophic callus after fractures.

Galvanic Punctures.—Negative, were used for two nodosities of callus about the second joint of a man's index finger, four months after the fracture, with the result of decrease in size and movement of the finger itself. Subsequently to get rid of the callus which was more evenly diffused, the percutaneous method was used, with the anode about the arm, the cathode around the injured finger. A sensible but not a painful current was used for from ten to fifteen minutes. After sixteen séances there was free movement of all three phalanges. There still remained inability to close the hand as forcibly as before the accident. Operative interference would probably have left the man with a crippled finger and hand.

In² a man seventy-nine years of age with gouty deposits along sheaths of extensor tendons of both hands twenty séances were sufficient for a cure, the anode, as in the previous case, being a large flat electrode bound around the arm, while the cathode, 5 c. m. broad and 20 c. m. long, was wrapped around each wrist successively.

Two cases of tendo-synovitis with hard bodies on the volar side of the meta carpo-phalangeal articulations were completely cured in twenty and twenty-five séances respectively.

This series of cases, representing as it does the various stages of the results of inflammatory action about articulations, strikingly illustrates the chemical, cataphoretic and vaso-motor effects of the galvanic current.

It is quite time that we shall recognize, not in isolated cases, but in general work, the value of galvanism in such conditions, and resort to it in good season.

The question naturally arises, Could not the case of sepsis have been successfully treated with the galvanic current, upon the subsidence of the acute inflammation, as the first case, thereby enabling the patient to resume his usual occupation, which he has had to give up, besides giving him a much more useful member than we can now hope to secure?

Why should we wait until the advanced stages, attended as they are with marked thickening of the articular and peri-articular tissues, contractions of muscles, exudative matter about sheaths of tendons, greater or less impairment of movement and deformity, in which electricity must be our chief resource, when better results can be obtained in a sub-acute condition, before exudative matter has become so fully organized?

¹ *Berliner Klinische Wochenschrift*, December 2, 1889.

² Same, July 28.

There is no danger of developing more acute inflammation. On the other hand, it is necessary to excite a more active circulation in the part, with a view of removing the congested state of the capillaries and venules, so favorable to the development of fibroid growths.

Massage is a means toward the same end; but while it quickens and equalizes the circulation, it does not possess the power of galvanism to produce chemical changes.

In the second case it had been used daily from about the seventh week after the injury, or for nearly a year. That it did much to prevent more complete immobility of the articulations there is no doubt, but that its action was limited as compared with galvanism the result clearly proves.

In adopting a definite plan of treatment I was governed by the hypothesis, which Dr. Morton has so ably and interestingly presented to us during the session, and upon which we have done our work at the electro-therapeutic clinic of the New York Post-Graduate Medical School and Hospital for the past four months, viz.: "That living means nutrition, nutrition chemical action, and chemical action, under proper conditions, means electric current. These conditions are (a) a closed circuit combined with (b) any two different tissues, and (c) the one acted upon, the other not.

Animal currents are proven to exist. The action upon tissue is an "electro-motive source." It corresponds to the zinc, say, of a primary battery. The electrolyte is the fluid conveying the food to the cells of the acted-upon tissues.

The acted-upon tissue is always *electro-positive* to some other tissue acted upon.

This hypothesis holds true of both normal and morbid nutritional processes. As regards such processes it compels us to base our treatment upon the *broad generalization that every such process is an "electro-positive focus."* That proliferation is an excessive chemico-nutrition, which the positive pole makes more excessive; the negative pole less excessive—that is, counteracts.

In atrophy there is a deficient chemico nutrition, which the positive pole stimulates and restores. The negative pole, on the other hand, makes more deficient or destroys.

The results in these cases, united with much that has been empirically done heretofore, are confirmatory of the hypothesis upon which treatment was based.

In the treatment of disease, results are, after all, the main thing, even if we can not always explain the relation between cause and effect in the use of our remedies. Yet once we have a scientific basis for polar action much confusion will be done away with, and we will have taken a decided step toward the establishment of a rational electro therapy. The hypothesis of Dr. Morton, based as it is upon well-known chemical and physical laws, seems, to me, to do away with an infinite amount of hypothetical reasoning less surely based, and which has not furthered our knowledge of therapeutical indications in the use of electricity.

In the class of cases with which this paper deals, electricity has been used for many years, but so long as authorities are satisfied with broad generalizations in recommending its use, there will be no progress.

As we are entering upon a new era of electro-therapeutics, evinced by our presence here, it seems, to me, that every case, treated with a definite idea of

the action of the chosen current and the polar effect, must form a useful contribution to the sum total of our knowledge.

ELECTRICITY IN DISEASES OF THE STOMACH.

By L. WOLFF, M.D.,

Physician to the German Hospital, Philadelphia; Demonstrator of Chemistry, Jefferson Medical College, etc.

THE employment of electricity to influence functional activity of the stomach, both by the constant as well as the induced current, has been advocated quite early in the development of electro-therapeutic science. It was found, and stated already by Ziemssen in 1877, that the muscular coat of the stomach was contracted on being connected with the current, and that its contractions were continued on in the pyloric portion, but only little so in the fundus. It was also stated by him that the circular fibres, more than the longitudinal ones, responded to electric stimulation; also, that it required to produce energetic contraction to have the viscus partly filled with water and air. Under those conditions, the gastric lumen was diminished, and part of its contents were expelled through the pylorus. These experiments, conducted on animals, were also confirmed by other observers, both in man and animals. Not alone was in this manner the influence of electricity on the motor impulses of the stomach demonstrated, but it was further shown that the glandular activity was increased, especially so by the employment of the galvanic current.

The experiments referred as well to the bi-polar external application of the electrodes, as also to the introduction through gastric fistulæ in animals and the œsophagus in man of one of the poles. Ziemssen states that the effect of strong currents applied with large poles externally, while acting both on the abdominal parietes, was manifest to the patient by sensation of warmth in the stomach and increased desire for food, followed by a considerably improved digestive action. This is not alone the case in normal stomachs, but also found under pathological conditions, such as old gastrectases and chronic dyspepsias. If one of the poles is introduced into the stomach containing some water, this action is admittedly more marked and energetic, though by older writers on the subject it was thought impracticable for therapeutic purposes.

Erb, in his hand-book on "Electric Therapeutics," after quoting the promiscuous use of electric currents in various affections of the stomach, mostly of the nervous variety and by the bi-polar external application, thinks it of use principally in atony and dilatation, especially arising from nervous debility and central disease. He claims thus to obtain contractions of the muscular coat of the stomach, and advises its use jointly with lavage. Leube recommends the electric current in gastralgia with anode over epigastrium and on the seat of pain. Brenner cured a sensory neurosis of the œsophagus by the application of a constant current along the pneumogastric with an. at the back of neck and ca. between sterno-cleido-mastoid. Nervous vomiting has been successfully treated both by the faradic and galvanic currents; also nervous dyspepsia, for which Beard and Rockwell recommend general faradization, when associated with neurasthenia. Erb states that the muscular fibers of the stomach react to electric currents by slow contractions, gradually increasing in a peristaltic manner. They respond more readily to the

faradic than the galvanic current, the former producing palpable peristaltic movements of stomach and intestines, with gurgling sounds. Schliep observed that water previously introduced into the stomach rapidly disappeared after faradization. Erb already noted that the internally applied electrode caused very little sensation. Onimus recommends the galvanic current from epigastrium to back, and from lesser to greater curvature; while Fuerstner and Neftel employed faradism over the dilated stomach. Erb thinks it most serviceable to apply a large electrode to the back immediately to the left of spinous processes, on level with cardiac end of stomach, and the smaller to the epigastrium. Thus the current produces vigorous contractions of the abdominal muscles. With the galvanic current, he recommends the an. to the back and the ca. labile over the stomach, after the latter had been washed out; he also considers that there will be rarely occasion for the use of an internal electrode. Pepper, at an early period (*Philadelphia Medical Times*, 1871), already stated his convictions that external faradization of the stomach produced, probably, little more than contraction of the abdominal muscles.

I have taken the liberty to quote here, at random, short notes on this subject from the current literature, to show that electricity, while universally esteemed as a therapeutic agent in diseases of the stomach, found by its many advocates a most diverse and varied method of application. Undoubtedly the painful neuroses may be controlled by the galvanic current, and the glandular secretion by it increased; but the principal application of electricity in gastric affections consists in the motor stimulation by means of the faradic current, when the atony of its fibers have caused more or less permanent dilatation.

It is due to more recent efforts that intra-ventricular treatment, by means of soft stomach tubes, has been popularized, and that also intra-ventricular faradization has been revived. The objections made by Ziemssen and Erb were refuted by Ewald, who has done so much in every respect to enlarge our knowledge of the stomach, its function and diseases. While this latter experimenter has definitely proven that with large electrodes and a strong faradic current, externally applied, salol was more rapidly eliminated from the stomach than without it, he decidedly gives the preference to intra-ventricular faradization over the external method in the treatment of gastrectasis, with the distant electrode either applied to the epigastrium, or, better still, in the rectum. My own experiences in the treatment of affections of the stomach have led me early to apply the two electrical currents. I shall first take up the use of galvanism in this connection. Its application with a view of exciting increased glandular secretion has been, in my opinion, decidedly overrated. I have at no time been able to detect by chemical means an increase of HCl in the gastric juice after the external application of the galvanic current in the manner as mentioned by the investigators heretofore. This will show at once that digestive ability has not been improved, though larger secretion might have been achieved. As internal galvanization with a view of improving digestive powers could only be practised in a previously empty stomach, and then partially filled with water, its value, if it possessed any, would not be available. Yet I have found the galvanic current useful and of the greatest value in dilating traumatic strictures of the œsophagus. To illustrate this, I will quote here the following case:

Mr. P. J., a French gentleman, fifty-five years of age, was admitted to my service at the German Hospital of Philadelphia with an œsophageal stricture. He stated that this arose from having swallowed in mistake a considerable quantity of strong HCl. some eight years previous. He had since then been obliged to restrict his diet to liquid and semi-liquid food. He had been under treatment in various hospitals and under private practitioners both here and in Europe; the methods employed in this purpose were gradual dilatation with the ordinary œsophageal sounds; at no time, according to his statement, had he been benefited sufficiently to eat salad or coarse food; on examination, the stricture was found of a caliber to barely admit a 27 m.m. bougie; gradual dilatation was practiced for some days, and larger bougies were only with some difficulty passed. The use of metallic bougies connected with the galvanic current then suggested itself to me; weak currents from five to ten m.a. were used, and it was noticed that the bougie passed under its influence with greater facility and could be readily increased in size; daily séances were held, and by doing so the stricture was rapidly dilated to 50 m.ms. This took only a period of about three weeks, at which time the patient was capable of eating ordinary diet, and was discharged at his own request. Nothing has been learned of him since. I am hardly prepared to attribute the success in this case to direct use of galvanism or to the absorption of the stricture by cataphoresis, but I am firmly convinced that the galvanic current facilitated mechanical dilatation in a most astonishing manner. The current strength during the treatment was often increased to 20 m.a. and over without having experienced any untoward influence upon the pneumogastric which Ziemssen and others caution against in such procedures. My electrode, which I here exhibit, is of the very simplest kind. It consists of a soft copper wire, at the lower end of which is a thread for screwing on the olive-shaped sounds, while at the other end is screwed on a clamp for the reception of the wire; the wire itself is insulated by being covered with a soft rubber tubing. When in use a large flat sponge electrode (such as I here exhibit) is applied over the epigastrium and the sound is inserted into the œsophagus to the stricture before connection is made; the current is then gradually turned on and increased until perceptible sensation under the external electrode is experienced by the patient. When removing the œsophageal sounds after it had been passed the stricture, the current should again be disconnected.

The only other application of electricity in the diseases of the stomach which I have found serviceable, consists in the faradic stimulation of the muscular fibers in atonic ectasis. I have described this before in a paper on the subject of gastrectasis—*Therapeutic Gazette*, July 15, 1891—and will, therefore, merely state here, that it is a most potent factor in the curative treatment of this disease. I can fully confirm all that the former writers on this subject have already stated, and, while lavage and other treatment is indispensable to overcome the chemical defects of digestion it is faradization alone that will restore the motor power of the atonic muscular fibers. The individual sensation of the patient is never one of discomfort, nor does the presence of the tube during the séance—which need never to exceed five to ten minutes—trouble any of those patients who have been educated to the mechanical treatment of the stomach by lavage. It has been my custom to wash out the stomach before the principal meal of the day, and after this the patient is requested to drink about two glasses of water; this

is followed by swallowing of the tube containing the electrode, which I here exhibit and describe below; the current is then turned on, first gradually and until peristaltic contraction is apparent to the hands applied to the parietes or to the eyes; the external electrode I generally apply to the epigastric region, and is usually a large and broad sponge; the internal electrode must be sufficiently deep introduced to insure its immersion in the water contained in the stomach; a patient describes the sensation within the stomach as devoid of pain, but one of rather active contraction of the viscus; as in the former case, my electrode is very simple, and, as you will see, while I exhibit it to you here, it consists of a small stomach tube with two fenestra; through the tube I have drawn a small insulated copper wire, letting the end come out of the lower fenestrum; this end I have denuded about two or three inches of its insulation, and have twisted into a small spiral, the size of the lumen of the tube, this spiral I have slipped through the fenestrum back into the tube in a manner that it appears within it without being able to come in contact with the stomach; the upper end of the wire is also twisted into a small spiral for the reception of and connection with the battery wire.

Einhorn has recently advocated the use of a covered mandarin attached to an insulated wire. I consider the one I have just described will be found much more simple, and the safest that can possibly be used, and assures at once by its greater firmness, that the lower end of the electrode shall be immersed in the water contained in the stomach.

A CASE OF RETROFLEXION AND CYSTIC DEGENERATION OF THE OVARIES, TREATED BY HYSTERORRHAPHY UNSUCCESSFULLY, AND CURED BY ELECTRICITY.

By A. H. BUCKMASTER, M.D.,
NEW YORK.

IN reporting this case, I have nothing startling, nor even novel, to offer the Society. It is the same old story of a case that has undergone a serious surgical procedure to be finally cured by one unattended with risk. The patient was a young, unmarried woman (probably well known to several of the members of this Society). In 1887 she complained very much of pain in the side and abdomen and in locomotion, and in 1888 she became an invalid. There were no elements of a hysterical nature in the case. In 1889 she fell into the hands of a distinguished specialist of this city, and he found much enlarged and cystic ovaries and retroflexion. This gentleman treated her for some time with but slight improvement, and finally made an explorative incision and stitched the uterus to the abdominal wall. The tubes were normal in size, and they and the ovaries were left, as the patient had specially desired that they should not be interfered with. She remained under treatment after this operation for a year, and at the end of this time there was little or no improvement. The gentleman who had charge of the case then sent her to me to "try what electricity would do for her." When I examined the patient I found the uterus had fallen back to a slight extent, and on the left side there was a hard mass that felt not unlike a fibroid. This was in the region of the broad ligament, and extended behind the uterus. I gave the patient three treatments a week, using the clay electrode on the abdomen and a platinum tip in

the vagina, covered with a large mass of moistened cotton, so that the resistance from the vagina was very great.

Within two months large pockets were made in the thickened mass that gave the sensation, on vaginal touch, as if the vagina contained large cicatricial bands; but the closest inspection failed to reveal anything like scar tissue. The absorption of the inflammatory tissue had taken place more actively in the immediate neighborhood of the point of contact of the electrodes. (I believe, from recent observations, that this undermining of exudations takes place in other cases than those treated by electricity, and what is spoken of in some cases as cicatricial bands is nothing but parts of a mass that have remained like the comb when the honey has been extracted.) After this stage of the treatment had been reached, the patient went to her home in another city and remained quiet for several months; and, having felt much relieved, returned again for treatment. The condition was much improved, and the patient was put on the same treatment for two months more. At the end of this time the uterus was freely movable, and the bastard bands had almost disappeared. Six months later the patient was in robust health, for the first time since childhood, and she has continued so; and I think she may be pronounced cured, as the *ovaries have returned to their normal size*. The surgeon who sent the case to me was so much pleased with the result that he has since placed several patients under my care for this treatment, and, while we have not had any case improve so markedly as the one cited, from a great doubter he has become a convert to the usefulness of electricity.

Before closing this case I desire to call to the attention of the Society a new form of water rheostat that I have devised, and which I believe is much more convenient than any of those now in use. The plates are like those in the Bailey rheostat, only much larger, and, instead of working up and down in the fluid with a ratchet, the plates are immovable, and the water led into the jar by a piece of tubing sliding into the faucet and syphoned out again. The faucet is slowly turned on so that a drop at a time is admitted, and the strength of the current is absolutely evenly increased. No attention is given to the rheostat; it flows in slowly until the desired amount is reached or the patient complains of pain, then the faucet is turned off. When it is desired to turn off the current, the tubing is pulled out of the supply pipe, and it syphones out the rheostat jar. If one has the time they are not difficult to construct, and have proved a revelation to me, in point of comfort to the patient and convenience to the operator.

50 EAST THIRTIETH STREET.

GALVANISM.

By A. G. HENRY.
CORTLAND, N. Y.

I SEND you a report of three cases of uterine tumors treated by me the past year with galvanism. The battery I used was a thirty-two cell one, Galvanofaradic Co.'s make, of New York. As I could in neither of the cases introduce a sound into the uterus more than one and a half inches, I used a small olive-shaped tip for the intra-uterine electrode.

In each case I invariably used negative cauterizations. The strength of the current, as measured by Flemming's milliamperemeter, ranged from 20 to 75 milliamperes, usually, after the first few applications,

from 35 to 55. Duration of sittings varied from five to ten minutes.

CASE I.—Mrs. B., of Trenton, N. J.; aged forty-nine years; married; never had any children; just passed the menopause. Examination showed an intra-mural fibroid tumor filling the pelvis and reaching to within two inches of umbilicus. Its growth had extended over several years, and was now giving considerable trouble to bowels and bladder. No history of recent or previous pelvic or abdominal inflammation. Began treatment July 7, 1890, and continued until December 2 last, fifteen treatments in all being given. There was steady improvement from the first, and at the last sitting, December 2, the growth was no larger than a hen's egg. She was symptomatically cured.

Examination of this patient, August 27, 1891, showed no recurrency of the growth.

CASE II.—Mrs. M.; married; aged forty-four years; menses regular; a resident of the city of Brooklyn. Was in Cortland spending her vacation with friends last summer when pelvic trouble induced her to seek medical aid. I first saw her August 5, 1890. She was confined to her bed with quite severe general pelvic inflammation.

After the inflammation had subsided, September 10, Dr. Hughes was called in to see the case in consultation. We found a sub-peritoneal fibroid tumor not larger than a goose egg, situated more to the left and projecting backwards so much as to seriously annoy the patient whenever a movement of the bowels was attempted. There was still much tenderness in the pelvic and lower abdominal regions. Treatments were begun September 12, and continued until October 17, thirteen treatments in all being given. Tumor was reduced one-half, and she was approximately cured symptomatically.

She returned to her work (teaching) October 19. This patient is in Cortland again this summer spending her vacation. I examined her a few days ago, about August 20. Tumor rather smaller than when I ceased treatment last October. Menses still regular. Feels perfectly well.

CASE III.—Mrs. F. B., Cortland, N. Y.; aged forty-four years; married; has never borne children. She says that some eight or nine years ago she began to have some pelvic trouble; a feeling of fullness, leucorrhœa, etc., and that some six years ago she noticed herself getting larger.

The enlargement continued to increase from year to year, until October 1890, when a severe pelvic inflammation sent her to bed, where I first saw her, October 7.

There was pelvic and lower abdominal peritonitis. Abdomen much enlarged and tympanitic. There had been considerable flooding at each recurrence of the menses the past few months, and the last four weeks hemorrhage had continued nearly all the time. After the inflammation had somewhat subsided, October 22, Dr. Ball saw the patient with me in consultation, and on October 30 Dr. Hughes was asked to see the case.

Examination at these dates revealed a large fibroid tumor, completely filling the pelvis and reaching an inch above the umbilicus.

The growth was very hard and somewhat uneven. Pulse rapid. Temperature from 100° to 102°; hemorrhage almost constant; patient much reduced.

It was deemed best to try electricity without further delay. Intra-uterine treatments were begun October 31, 1890, and have been continued, with interruptions, to the present time. With the exception of a

slight inflammatory attack last spring progress toward recovery has been uninterrupted.

The tumor now is not larger than a hen's egg. She is doing her own housework, and says she feels better than for many years.

OBSTETRICS AND GYNÆCOLOGY.

By E. S. MCKEE, M.D.,
CINCINNATI, OHIO.

CANCER OF THE UTERUS, Dr. T. A. Reamy, Cincinnati, Ohio. When, by clinical examination, the disease appears to be confined to the portio-vaginalis, it having commenced at the junction between the pavement epithelium covering the vaginal aspect of the cervix and the columnar epithelium of the canal, or in the provisional epithelium between these two lines, the site of origin in the majority of cases, the disease not having extended to the vaginal junction, in the pavement epithelium, its limitation to the portion may be assumed absolutely. Not one case out of 500 within the above clinical definitions will, upon removal, show that other portions of the uterus are involved. Under such circumstances, how can it be possible for total extirpation to more effectually remove all diseased tissue than high amputation of the cervix? As a matter of fact, under the exact conditions named, all diseased tissue, and all suspicious tissue, would be effectually removed by amputation at the vaginal junction, a procedure which I still sometimes employ; although of late, in such cases, I usually make high amputation, thoroughly cauterizing every portion of the stump and walls left after incision with the Pacquelin cautery, after the manner of Baker, of Boston.

The tendency of the disease, when it commences in the pavement epithelium of the portio, is not to involvement of the corpus, nor of the coporeal endometrium, next in order, but of the parametric tissues, on a level with the vaginal junction, and subsequently lymphatic involvement above this line, the corpus remaining healthy.

The perfect key formed by the uterus, in the arch sustaining the abdominal contents, cannot in its usefulness be overestimated. It further prevents descent of the intestines into the excavation left after its removal in hysterectomy, a position in which adhesions are likely to occur, and among other evils as a result, recurrence of cancer in the intestinal peritonæum. I have had one such case. Again, the retention of the ovaries and corpus uteri leaves the woman in the same physiological state as before, a matter of no small importance. In this same connection is the fact that this much of the pelvic circulation is not interfered with.

(a) Since most of these subjects have passed the menopause, the danger of pregnancy does not exist.

(b) In those subjects who have not reached that period, pregnancy is not very probable after high amputation.

(c) Should it occur in a subject after high amputation, where cicatricial contraction is sufficient to render dilatation and safe delivery improbable (this amount of cicatricial contraction being by no means always present after high amputation) an abortion would probably be justifiable.

(d) This course not being elected, a Cæsarean section or a Cæsarean porro may be done. Probably a still better course in such a subject would be to remove the ovaries after the patient had fully recovered from the cervical amputation. The tubes, if found

healthy, need not be disturbed. Ordinarily the danger from this operation would not be worthy of consideration. This would still leave the supporting arch and the complete circulation. It would, in my judgment, be far more surgical than the removal of the uterus, unless it could be shown that its removal was an element of safety against the primary disease.

The induction of labor pains by means of the application of electricity to the mammary gland is reported by Freund (*Centralblatt fuer Gynekologie*). He applied the cathode to the gland and the anode to the abdomen. Five to seven milliamperes are suggested.

Galvanism in Gynæcology is discussed by Engelmann, of Kreutznach, in the *Deutsche Medicinische Wochenschrift*. He believes that a retrograde metamorphosis in fibroid tumors is seldom had under galvanism, at least, enough to show sensible diminution in size, endometritis is benefitted, hemorrhage and leucorrhœa disappear, pressure symptoms are relieved, reflex neuroses disappear, and he thinks the method of value as an adjunct to other plans.

Extra Uterine Pregnancy has been observed by Pinard (*Le Bulletin Medica*, August 19th, 1891) in seven cases recently. In these cases the primary accident and functionary troubles occurred in every instance at the end of the first month. The foetus usually died before its complete development. In one case it was found of normal weight. The foetal cyst was generally immobile through adherence in the abdominal wall, possibly mobile as in his second case when it prevented contractions which one could attribute to the uterus. The foetal cyst always presented two apartments, one foetal and one placental. Sometimes the foetal apartment was such as to render the extraction of the foetus difficult or impossible, as in this fourth case, where decapitation of the foetus was necessary. The author thinks the benefits which accrue from a judicious surgical intervention are very great. The seven cases together, with three already reported, make ten women operated upon, with nine recoveries. The single woman who succumbed was operated upon *in extremis*.

Society Notes.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated Meeting, November 20, 1891.

SAMUEL KETCH, M.D., Chairman.

A CONVENIENT DRESSING FOR CASES OF TORTICOLLIS AFTER OPERATION.

DR. R. H. SAYRE presented a boy upon whom he had operated, twelve days before, for the relief of torticollis. The case illustrated the form of dressing which he had found very useful after such operations. It consists of a plaster-of-Paris jacket and a jury-mast, the upper part of which has a fan-shaped expansion fitting the occiput. After a thorough subcutaneous sub-division of the sternal and clavicular attachments of the muscle, the boy was allowed to come out of the ether, and then a tightly-fitting foot-ball cap was pulled down over the ears and covered with a plaster bandage, which also in-

cluded the expanded portion of the jury-mast. In applying this dressing, care was taken to place the head in the normal position. The mechanical appliances usually employed for the after-treatment of these cases is difficult and tedious to make, and must be made for each patient; and even then are hard to keep in position.

DR. A. M. PHELPS considered this the most efficient dressing of its kind which he had seen.

DR. N. M. SHAFFER did not share the opinion that the mechanical appliances ordinarily employed were complex, and difficult of application; on the contrary, he thought they possessed a distinct advantage over this fixed plaster dressing, as they allowed of frequent but slight changes of position, and a gradual restoration to the normal position. The case just presented did not show a complete correction of the deformity. In two recent cases of club-foot in which he had endeavored to fully correct the deformity at once, too long a tendon was the result.

DR. L. A. SAYRE said that he had employed this dressing for the last ten years to the exclusion of all others, and had found it more efficient than any he had previously tried. The principle of practice laid down by the previous speaker he considered erroneous; immediate and full correction of the deformity was much better than tormenting the patient at short intervals by frequent stretching of partly-adherent tendons. If proper judgment were exercised, the tendon should not be too long.

DR. PHELPS said he wished to heartily indorse the principle laid down by Dr. Sayre. The English method of gradually reducing the deformity by stretching was, in his opinion, a fruitful source of non-union of tendons, and of their adhering to their sheaths. He had never had a single case of non-union of tendons, and he always divided them thoroughly and super-corrected the deformity at once.

DR. R. H. SAYRE, in closing the discussion, said that in certain cases of wry-neck where stretching was preferable to tenotomy, the Archimedean screw and other mechanical appliances usually employed, were very effective; but if the tissue be contracted, and hence required tenotomy, he thought the dressing he had just shown would be found to give more perfect fixation of the head. Immediately after the tenotomy, a certain amount of material is poured out between the ends of the divided tendon, and a large gap can be filled up as easily as a small one. As the amount of this exudation neither increases or diminishes after the first effusion, it follows that if the position were not fully corrected at the time of the operation, subsequent stretching can only produce elongation of the tendon at the expense of its diameter.

DR. HALSTED MYERS presented a case of

LUMBAR POTT'S DISEASE,

with a very large abscess occupying the right side of the abdomen from the ribs to the pelvic brim, extending nearly to the median line in front.

The boy's general health was excellent. He was fat and ruddy. His bowels were regular. There was no albumen or casts in his urine. There was no enlargement of the liver. His temperature varied between 98° and 99° F.

The patient was presented to illustrate a not small class of cases, and to prove that very large cold abscesses can, and do, exist without causing any disturbance of the general health.

DR. THOMAS H. MANLEY thought the lesson to be learned from such a case was, that extreme conserva-

tism should be exercised in the treatment of abscesses where they do not give rise to pronounced constitutional symptoms.

The Chairman was of the opinion that one of the most important lessons which the orthopædic surgeons had impressed upon the general surgeons was, that many cases of abscess disappear under proper mechanical and constitutional treatment. He would even go further, and say that many abscesses were prevented by such treatment, and that as these methods more nearly approached perfection, abscesses would be less frequent complications of Pott's disease. While admitting that at times it was very difficult to decide as to the advisability of operative interference, he was personally of the opinion that in cases of joint or spinal disease, there was less risk from the non-operative treatment, for the reason that pus in a closed cavity is much less dangerous than after the cavity has been exposed to the air.

DR. PHELPS said that in the case just presented, the abscess was probably really a cavity filled with tubercular material, and free from the germs of supuration; but while such "cold abscesses" might remain for a long time without doing any harm, they were liable, sooner or later, to become infected with pyogenic germs, and when this occurred, "burrowing" would begin, and the patient would exhibit all the usual symptoms of sepsis. As there was no means of telling when such infection would occur, he thought it wiser to operate on all such cases. He felt perfectly confident that he could operate on all such cases without any danger from sepsis, and he had never seen any deaths attributable to such operations in his hands.

DR. SHAFFER said that this theory sounded very nicely, but a large hospital experience extending over a period of twenty-eight years, during which time he had tried various methods of treating these abscesses, had taught him to regard them as of no great importance, and he would not consent to opening these abscesses unless there were severe or prolonged constitutional symptoms due to the abscess. If we were wise enough to let these abscesses alone, the patient would usually do better than if they were opened.

DR. R. H. SAYRE said that his experience with these abscesses had been quite different from that of the previous speaker, and he looked upon them as representing a serious phase of the disease. Where the abscess cavity did not admit of safe and thorough evacuation of its contents, so that healing might proceed uninterruptedly, it was better not to operate, unless there was serious constitutional disturbance. Letting all cases of abscess alone was as harmful practice as opening every abscess which presented itself.

A CASE OF TALIPES EQUINO-VARUS SHOWING THE IMPROVED LATERAL TRACTION APPARATUS.

DR. N. M. SHAFFER said that the development of this traction apparatus had been attended by much experimentation and annoyance, and during this period, there had been naturally a number of failures. A large number of cases of pure equinus which would ordinarily be condemned to tenotomy, could undoubtedly be cured in this way, but in the more complex deformity, known as equino-varus, the mechanical conditions were much more intricate. The first two cases which he presented were intended to show the good results which had been obtained without the latest improvement, and the third one, to show the improved apparatus applied to the patient, as well as

to exhibit the result of three month's treatment. In the older instrument, there were three movements, viz.:

1. One which put the foot in any position as regards the equinus.
2. One which threw the foot outwards as far as desired, and locked it there.
3. One which drew the foot around into a valgus position.

It had been found in cases which had been treated by this apparatus, and were apparently cured, that there was inward rotation of the whole foot on a vertical axis, and the object of this latest improvement was to correct this defect. It consists in extending the apparatus up to a pelvic band, and introducing a fourth movement, by which the whole foot is turned on the vertical axis.

The girl whom he exhibited with this apparatus, had been admitted to the Orthopedic Hospital, on August 27, with such a severe type of double equinovarus, that he thought many would have advised operation. The four movements which he had described had been made "up to the point of toleration," and repeated many times a day. They were executed in the following order:

1. Bringing the foot up while the heel is held down.
2. Throwing the foot outward and keeping it there.
3. Turning the whole foot on a vertical axis.
4. Throwing the foot into a valgus position.

While the third movement is being made, it is noticeable that the patella does not move. The results he had obtained with this new apparatus were remarkably quick and satisfactory.

[DISCUSSION POSTPONED.]

A STUDY OF ONE OF THE ETIOLOGICAL FACTORS OF LATERAL CURVATURE OF THE SPINE.

DR. CHARLES L. SCUDDER, of Boston, presented the results of an investigation into the seating of 3,500 school girls, with especial reference to the effect of poor seating upon spinal deformity.

Lateral curvature of the spine is in all probability due to several factors:

1. The superincumbent weight of the body falling upon a
2. Spine weakened either in bone, muscle, or ligament,
3. Held persistently out of the median antero-posterior plane of the body.

DR. SCUDDER made a careful examination of the seating in schools, and found that faulty positions, one of the elements of the third etiological factor, are certainly induced because of the lack of adoption of seat to pupil and pupil to seat. How much of a factor in causing lateral curvature poor seating is, it is impossible to say, but that it plays an important part there can no longer be any doubt.

The author suggested that the present seating arrangements of schools be used to better purpose than hitherto, by arranging scholars more carefully in the room, and having careful supervision exercised by those in charge.

He then described the development of the adoption in the Boston public schools of the Swedish gymnastic system, and regarded it as of the highest importance as a measure likely to be somewhat preventive of spinal curvature induced by poor attitudes in sitting. This is to be brought about by no specialized gymnastics, but by general, central movements which shall tend to develop the whole child along the lines of his natural muscular development.

DR. L. A. SAYRE said that if proper attention were paid to the physical training of girls, there would be few cases of lateral curvature.

DR. V. P. GIBNEY said that the paper reminded him of some observations he had made at one time in our public schools. In passing through the schools he had been struck with the frequent changes of position of the pupils, and he had concluded that faulty attitudes were not so potent a factor in this condition as he had previously imagined. He was, however, willing to admit that it was quite possible that weak children having once assumed a comfortable attitude, would be likely to maintain it long enough to be injured thereby.

DR. RAMON GUTTERAS agreed with the author as to the great importance of the Swedish gymnastics in the training the bodies of young children. As to the matter of desks, he was happy to say that school desks and chairs had recently been invented by E. E. Hicks, a student of the University, which could readily be adapted to any height.

DR. H. L. TAYLOR said that the author had shown indisputably the necessity for competent medical supervision of our public schools. As lateral curvature occurs rather more frequently among the children of the well-to-do class, who, as a rule, attend private schools where the seating of the children usually receives more careful consideration than in the public schools, and, as this deformity also sometimes develops among children who have been entirely educated at home, he was not willing to admit that faulty school attitudes were very potent in producing the deformity in question. They undoubtedly do children harm, but it is still an open question as to how much they have to do with the production of lateral curvature. The instinct of young children is to keep in motion, and one of the great faults in our system of education is the absence of frequent short recesses. A recess of five minutes between each recitation, especially if utilized for gymnastic exercises, would prove very beneficial, and he hoped the paper would receive that wide and thoughtful attention which would lead to the introduction of rational physical culture into our school life.

THE CHAIRMAN said that his own impression was that no habit in itself, no matter how long continued, could produce an idiopathic rotary lateral curvature of the spine. Some years ago he had written upon the etiology of this condition, especially in young children, and had called attention then to the fact that the curvature was present before the children assumed these faulty positions, or, in other words, that the position was the result of the curvature, and not the cause. He was willing to admit, however, that a *curve* of the spine could be produced by a long continued bad position.

DR. SCUDDER, in closing the discussion, said that he recognized that among the many factors which entered into the causation of lateral curvature, three important ones were the superincumbent weight of the body upon the spine.

1. Weakened by a diseased condition of the bone, *e. g.*, rickets.
2. Weakness of the muscles (not yet demonstrated).
3. Weakness of the ligaments.

Although it was not yet known whether one or all are present in any given case, it was known that the superincumbent weight of the body falling upon a spine, which is kept in the median plane of the body, causes only an antero-posterior curve. This was known both by demonstrations on the cadaver, and by observations on the living subject. But when

the spine deviates from this median plane, a certain amount of lateral curvature results. His paper embodied a study of the effect of faulty positions on the body, and did not assert that faulty positions in themselves caused lateral curvature.

THE ANATOMY AND MECHANISM OF THE FOOT, WITH SPECIAL REFERENCE TO TALIPES; AND THE EXHIBITION OF A SHOE FOR CLUB-FOOT.

A paper with this title was read by DR. JAMES E. KELLY. He indicated the relation of the progression of terrestrial animals to cyclical motion, likening that of bipeds to a unicycle in rapid motion, and a lateral bicycle, such as the "Otto" in slow motion, while a quadruped resembled an ordinary bicycle in rapid and a quadricycle in slow motion. He indicated the relation of the pelvis to the "hub" or nave of a wheel; the thighs and legs to the spokes, and the feet to rim or tire. Great economy was claimed in weight, space, labor, and nutrition by the substitution for the entire wheel, of two spokes, and the corresponding tire segments or feet, which alternately assumed the functions of the numerous portions, each oscillating as a complex pendulum, and describing the brachistochrone, or curve of the most rapid descent. He exhibited a model which reproduced the movements very accurately.

Dr. Kelly controverted the accepted description of the foot as consisting of antero-posterior and transverse arches, and demonstrated the fact that the two feet placed together constitute a dome or cupola, the entire margins of which rested on the ground, and, consequently, one foot might be more properly termed a semi-dome. He proposed an original explanation of the advantages we derive from the outer toes being the shorter, in the fact that when the semi-dome revolved on its margin from the posterior to the inner anterior portion, corresponding to the great toe, while the body moved forward, the consequence was that the ankle was bent outwards and placed in the most favorable position for clearing the inner side of the opposite foot when swinging forward to assume its anterior position. He dwelt on the nomenclature of talipes, and suggested the term "talipes ankylosis" for that form described by Dr. Schaffer as "non-deforming talipes." He entered into the mechanism of talipes more especially with regard to the type than the particular form, and reduced the factors of deformity to extension, luxation and torsion, and indicated their participation and isolation in various deformities. He also spoke of the influences which produced the deformities, as modeling pressure and adaptive growth, and indicated that mechanical treatment was limited by the extent to which the same factor could be utilized in rectification. The question of operation was to be decided by the same standard. He exhibited some diagrams which demonstrated the theoretical advantages of the removal of the wedge-shaped pieces of bone, with the careful avoidance of the articular surfaces, from the calcaneum, the internal cuneiform, and the tibia in talipes valgus, and the comparatively great rectification which could be obtained by the excision of very limited wedges. The author dwelt upon the ease and safety with which all portions of the tarsus could be approached through incisions along the margins of the foot, owing to the stratification of the structures forming the sole, and advocated the section of the plantar ligaments by an oblique incision parallel to the tendon of the peroneus longus from the outer

side, and the freeing of the cuboid bone by a curved incision from the inner margin of the foot.

Dr. Kelly also exhibited an apparatus which he had invented in 1881, and first demonstrated before the Massachusetts Medical Society in 1884 or 1885, in a discussion on a paper read by Dr. Edward H. Bradford on "New and Original Methods of Treatment of Club-Foot." The appliance consists of a boot with a metal sole-plate, a pair of strong drawers with a "box knee-cap," and a number of slight elastic bands. The plate resembled a segment of a saucer from which the steadying rim had been removed. The boot was placed on the flat central portion, and had a number of holes along the elevated margin, from which the elastic bands passed to the lower band of the box knee-cap. The apparatus utilized the weight of the patient's body as the rectifying force, as at each step a part of the curved portion of the plate coming in contact with the ground, rolled it over until it reached the only part that afforded stability; namely, that upon which the foot rested, and consequently the member was forced into the most advantageous position. The elastic bands were added for the two-fold object of maintaining, during repose, the benefits derived from locomotion, and of exercising lateral torsion on the foot by an easy arrangement of the bands with regard to the plate and the knee-cap. He expressed the belief that the shoe in its present shape would be useful in the less aggravated forms of talipes equinus and varus, and as an adjunct in the treatment of the more severe examples.

[DISCUSSION POSTPONED UNTIL THE NEXT MEETING.]

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

November Meeting.

The President, DR. WILLIAM E. MASELY, in the Chair.

DR. JOHN MORRIS gave an address entitled "A Parting Word upon Obstetrics."

I began the practice of obstetrics forty-six years ago, and, for the first four years, kept a record of my cases. The first year I attended 35 cases. I was associated with Dr. Hintze, who, at that time, had a very extensive general practice, and who was very often called to assist midwives in their troublesome cases. I kept a careful record of my first 200 cases, but, after that, I abandoned the record, a fact which I have since very much regretted.

My first case was a very unfortunate one. I attended the patient in my student days. This woman was in the country, and was in labor three days. At the end of that time I sent for Dr. Hintze, who delivered her with the crotchet. On account of the long impaction of the head, the whole of the anterior wall of the vagina sloughed away.

The woman is still living, but so much tissue was destroyed that it was quite impossible to close up the opening, and all these years the urine has been passing from her as rapidly as secreted.

My second case was a black woman, who had a prolonged labor. I had never seen the forceps used, but tried to put them on and failed. After a while the child was born without any artificial assistance.

One of my great difficulties in my first cases was to find the cervix. I had never had any practical instruction in obstetrics, and did not know that in the first stage, before much dilatation, that the os is usually found far back against the sacrum.

Among other things that I think I have learned is how to shorten labor. One of the best means of accomplishing this is by external pressure. I learned that from my master, Dr. Hintze. Another was to pass the cervix around the occiput; and I found that these two shortened labor very considerably.

I think I acquired the art of preserving the perinæum. I believed in keeping the head under control and not allowing it to be delivered too rapidly.

In Ireland, I learned how to preserve the perinæum when using forceps. The secret is simply to change the axis of traction, as the head comes to the perinæum first upwards, perpendicular to the bed, and then carrying the handles far over on to the abdomen of the mother.

I have found that midwifery is underrated in the profession; but I am convinced that in no branch is there greater opportunity to display skill and judgment. This branch is esteemed much more highly now than formerly.

Formerly, in conditions of rigid cervix, it was the practice to bleed. I have done it many times, but it would not be tolerated now.

I am convinced that hot water injections will assist in relaxation.

I have no faith in belladonna.

I have been fortunate in not seeing any cases of hemorrhage. I believe external pressure used during labor will prevent post-partum hemorrhage.

For the first ten years I used ergot in nearly every case during the second stage, but have not used it now for fifteen years. In cases of delayed labor, I now prefer the forceps to ergot.

The crotchet has gone out of use, but formerly it was used frequently. Often the woman was injured, and, not infrequently, the doctor's fingers suffered.

Dr. Hintze had a glove to protect his fingers.

We had, at that time, no chloroform, and often in transverse positions, the woman would die undelivered, because it was not possible to turn and deliver. I have not habitually used anæsthetics except in forceps cases. I have thought that they prolonged the labor; but I always use chloroform when any force is to be resorted to.

I have never used the binder, because I could never see the philosophy of it. It will not stay in position, and it is absurd to think it controls hemorrhage. The only good that I could ever see that it accomplished was to please the woman.

When to use forceps—always use forceps when labor is delayed in the second stage. The old forceps were a much weaker instrument than the one's constructed on the Tarnier principle. I think the Tarnier forceps the greatest advance in obstetrics in my time.

In placenta previa, and in abortion, we formerly used a tampon made of a handkerchief, rags, cotton, or anything that could be had. These tampons were dirty and dangerous. Later I have used only the colpeuryntur. It assists to dilate the os, as well as being the most efficient tampon. It is clean and harmless.

Opium is the best thing to relieve pain in labor. It does not arrest the labor. When the os is dilated it increases the contractions.

DR. F. E. CHATARD exhibited to the Society the obstetrical instruments used by his grandfather, 1810-1840, and also those used by his father, 1835-1875.

He stated that he had used external pressure with apparent good effect.

DR. WILMER BRINTON stated that external pressure was used by primitive people. He thought that in rigid os he had gotten good results from the administration of chloral in 15-grain doses every fifteen minutes until three doses were given, as recommended by Playfair; but the number of cases in which he had given chloral was small.

DR. G. LANE TANEYHILL had used chloral per anum with great satisfaction in three cases. In less than an hour the os had been considerably dilated, and delivery was effected in each case within three hours, other remedies having failed. He had learned this treatment from our learned fellow member, Dr. Williams. He uses 30 grains chloral in milk.

DR. P. C. WILLIAMS thought it was very important to consider agents to relax the parts. Chloral in 40 to 60 grain doses per anum had given good results, but sometimes it, as well as chloroform, fails to completely relax the cervix.

In his earlier experience he had encountered many cases of post-partum hemorrhage, but since he had made use of a practice that is condemned by most obstetricians, that of giving ergot before chloroform, he had not had a single case of hemorrhage. He had seen no harm result from this practice, but thought he had in this way shortened the labor.

The objection to morphine to relieve pain is that it nauseates badly afterwards. Chloral must be pushed to get good effects. The objection to it is that sometimes it leaves the patient more or less delirious, and may seriously depress the heart if given too frequently.

DR. WILLIAM S. GARDNER had used chloral in 15-grain doses, repeated every fifteen minutes, in a series of cases, and found that while the patients had very little relief from pain, that a large percentage of them would be made sick at the stomach, and the discomfort caused by the disagreeable taste of the drug, and by the vomiting following its use, more than counterbalanced the little good it did, and its use in this way was abandoned.

He gives it frequently for the relief of false labor pains. A dose of 30 grains will almost invariably relieve the pains and put the woman to sleep.

DR. WM. P. CHUM had used chloral a number of times, but could get no positive evidence of its value, but it does not seem to obtund the pain. If opium will do this it might be advisable to use it.

DR. L. E. NEALE was surprised that a discussion as to the value of chloral should be brought up. He thought that the time for discussion of that subject had passed.

Whether it would act more efficiently by the rectum, or by the stomach, he did not know; but he thought 60 grains too large a dose, and would be afraid to use that much as an ordinary dose by the mouth.

The remarks were entirely too general to admit of special discussion.

WILLIAM S. GARDNER, M.D., *Secretary*.

712 N. HOWARD STREET.

The Polyclinic.

COOPER HOSPITAL (N. J.) NOTES.

PROLAPSUS UTERI.

IN reducing the third degree of prolapsed uterus (that degree in which the uterus has passed out from the vagina) place the subject in Sim's position; grasp the uterus and, while compressing it, push it

upward in the direction of the axis of the pelvic outlet until it has passed within the vagina. To still further elevate it in the direction of the pelvic inlet, or to its natural position, soft sponges attached to sponge-holders afford the easiest means of accomplishing this part of its complete reduction. In reducing the uterus, however, from the second and first degree of prolapsus to its natural position, the organ tends to pass into a state of retroversion, and, in order to prevent this, it is best to introduce a sound to guide it to its proper position.

To retain the uterus in position, recumbency should be insisted upon; hot, astringent douches used, and tampons of borated cotton inserted, from time to time, until the relaxed uterine ligaments have in part regained their lost power. Then Peasley's ring pessary of soft rubber may be introduced, if the perinæum is sufficiently intact to hold it in place; if not, the perinæum should be repaired. It is better, as a rule, to repair the perinæum, than to resort to uterine supporters with their straps and perineal bands, while uterine supporters, that are in part outside of the vagina, may hold the uterus at the proper elevation, yet they are open to two objections: First, they do not hold the uterus in its proper axis and admit, if not cause, retroversion and finally retroflexion; second, they do not admit of that range of motion that the uterus requires and, therefore, cause pain.

—Godfrey.

A SOURCE OF ERROR IN ARSENIC DETERMINATIONS BY MARSH'S METHOD.—It is a well-known fact that the evolution of hydrogen gas from dilute sulphuric acid and zinc is rendered more steady and uniform if a few drops of solution of platonic chloride are added. J. Thiele has recently announced (in *Chem. Zeit. Am. Dr.*) that, if arsenic is to be tested for, this addition of platinum must be omitted, since the arsenic reaction is notably interfered with through it, or may entirely fail when only minute quantities are present, probably owing to the formation of arsenio platinum. Tin does not interfere with the reaction.—*Pharm. Era*.

BRYSON DELOVAN (N. Y. *Med. Rec.*) suggests the following as an excellent method for administering iodide of potash:

"To administer a 5-grain dose of the iodide, place 5 drops of the saturated solution of the iodide in the bottom of a small tumbler, with 15 drops of essence of pepsin, and, if desired, a teaspoonful of sherry; upon this pour 2 ounces of warm milk, and set away in a cool place. The milk must not be too hot, as otherwise the digestive properties of the pepsin will be destroyed. Coagulation soon takes place, and the mixture is then ready for use.

"For the general convenience of the patient, the following formula may be dispensed:

"R.—Potass. iodid. (sat. sol.) 160 grs.
Essence of pepsin ʒj.
Sherry wine.....q. s. ad ʒiv.

M.—Sig. ʒj in 4 tablespoonfuls of milk, according to directions.

"While this method may not be necessary in many simple cases, there are, nevertheless, a very considerable number in which it may be employed, and in which it will be found to fill the required conditions better than any other now in use."

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DO THE BEST.

ACCORDING to the London *Lancet*, a physician who is uneducated may sometimes do very well; but he can never do his best. There are few who will deny this. By uneducated we do not mean an ignoramus, but one who has not had the advantage of thorough preliminary mind culture before entering the school of medicine, and of the best instruction whilst learning his profession. Those who fancy there are some self-made medical geniuses who rise above the ordinary rank and file of the profession, and thus prove that nature is stronger than art, simply point out men who, by innate ability and enormous industry, have partly overcome the fault of their education, but who, had they been properly armed, could far have surpassed themselves.

Some one has said that one of the principal advantages of sending a boy to college is the fact that there he has a room to himself. Another advantage, fully as important, is the fact that he there can—and must, perforce—compare himself with his equals and his superiors. We have seen boys who, in their own little provincial town, were admired and pointed out as the “smartest fellow in town,” and who strutted back and forth “cock of the walk,” fairly cry with anger and vexation when one of their literary efforts, which had aroused rustic enthusiasm, was severely handled by the critic in the college literary society. A liberal education first teaches a boy, if there is any good in him, how ignorant he is; and, secondly, suggests how he may improve his condition.

An anecdote is related of a certain Methodist parson who was loudly inveighing, before a ministerial assembly, against schools of theology, and finished by thanking God that he had never “rubbed his back up against one.”

“Do I understand the brother to say that he thanks God for his ignorance?” asked the bishop.

“Well, yes, if you want to put it that way,” he replied.

“Then all I have to add,” said the bishop, unctuously, “is, that the brother has a great deal to be thankful for.”

A conscientious man is always handicapped by the recollection of deficient early education. A clergyman of our acquaintance occurs as an example of this fact. Entering the ministry late in life, he did not have the advantage of a classical education. Though by natural ability and indomitable energy he has become mentally superior to the majority of his compeers who had that advantage, nothing can persuade him of it, and he will end his days without ever having approached the relative position that he ought to hold, not only among his own associates, but also in his own mind.

In these days of the general dissemination of knowledge, it is necessary that the physician should know more than mere medicine, or he is not fit to be a member of a learned profession. A respectable preliminary education would not have allowed an otherwise bright medical student to maintain, in an argument over a pronunciation, that a man had a right to pronounce a word any way he pleased. The general lack of care in pronunciation among medical teachers no doubt helped inspire him with this idea; but it will not be conceded by most people, we believe, that in matters of pronunciation, at least, every man is a law unto himself.

E. B. SANGREE.

Annotations.

THE fine address printed in our issue of December 5, was by C. H. Hughes, of St. Louis. The name was not appended to the manuscript, and owing to the fact that our proof-reader was off duty during that week the omission was not noticed till the edition had been printed.

THE daily papers lately recorded an unfortunate occurrence, the result of a policeman's mistake. A man who had been arrested the night before for drunkenness was found in his cell the next morning dead of apoplexy. It was proven at the inquest that the deceased was a gentleman of most sober habits and upright character.

Of course, we cannot demand of the average policeman a diagnostic ability equal to that of a medical practitioner; but, at the same time, we think it would be well to impress on their minds the fact that a man who is unconscious is not necessarily “dead” drunk—the conclusion they at once jump at. The possibility that any one of us is liable to a similar accident, with similar consequences, makes us wish that it may be as remote a one as can be.

GOOD came even out of Nazareth, and the Keeley craze has resulted, as we hoped, in directing the attention of the medical profession to the subject of inebriety, by rational, scientific means. We understand that there has been a large increase in the admissions to Walnut Lodge, Dr. Crothers' institution, and that it is filled to its utmost capacity. Dr. Enfield has just opened a sanatorium for the treatment of these cases at Bedford Springs, where patients

may receive the benefits of skilled treatment, with all modern accessories, such as baths, electricity, massage, etc., etc., together with that still more effectual restorative agent, pure mountain air. It is hardly credible that physicians should be so credulous as to put faith in the Keeley affair, when they can place their inebriate patients in the hands of really skillful specialists within the pale of regular medicine. The death of Dr. Standiford, of Chicago, who had relapsed from an alleged cure at Keeley's hands, has done much to discredit the Dwight system; following upon the numerous deaths already reported as occurring during or shortly after the treatment. It is interesting to note the ingenuity displayed by the Keeley Advertising Bureau in explaining these relapses and deaths. It is always the victim's fault; he has been cured, but wanted to "experiment;" to "test the efficacy of the cure," and at the first test the "cure" collapsed utterly.

Communications.

SEVEN weeks ago, a young lady, nineteen years of age, was brought to my office by her parents, who said she had suffered from asthma ever since she was ten years old. I found the following symptoms present: Shortness of breath, occurring in paroxysms; sometimes does not recur for several days, then lasting, with intermissions, for weeks; may last for a whole night at a time; is not made worse by exercise, nor relieved by rest; no expectoration; attacks were at night; no wheezing sound in violent exercise; tongue clean; bowels generally constipated; respiratory murmur on right side distinct; expiration sound not markedly prolonged; on left side, murmur slightly harsh; no râles; respiration jerky; more marked on left side than on right; heart-beats distinct and forcible; impulse increased; soft murmur at apex—cause not traceable. Has had chills and fever since above trouble.

I put this patient on the following treatment. She came back, at the expiration of two weeks, much improved in every way. I renewed the same, and she has just left my office, entirely well in every way, as far as I can ascertain.

R.—Acid hydrocyanic dil..... 3¼.
Tinct. lobeliae..... 3ij.
Syr. scilla comp..... 3ss.
Spt. lavender comp..... 3ij.
Syr. simp 3j.

M.—Sig. One teaspoonful to be taken when attacks come on, and repeated within an hour if not relieved.

Also, for the constipation, gave her Prof. Waugh's pill:

R.—Ext. aloes purif..... gr. x.
Ext. nucis vom..... gr. x.
Podophyllin gr ij.
Oleoresin capsici..... gr. ij.
Sacch. lactis..... q. s.

M. ft. in tablet, No. xx. Sig. One at breakfast, daily.

WILL EDGAR HOLLAND, M.D.

FAYETTEVILLE, PA., DECEMBER 4, 1891.

PARISIANS strongly object to the arc lamp posts in the Place du Carrousel. To their imaginative eyes the whole apparatus resembles a gibbet, and they have dubbed it so. In order to make the posts look a little less uncanny and please the public æsthetic eye, the posts are to be painted and gilded.

The Medical Digest.

JAVAL says that Jews frequently suffer from diabetes and eczema, but epilepsy and insanity are rare among them.

NITRATE OF SILVER IN GASTRIC CATARRH.—M. Forlanini records several cases of chronic gastric catarrh which were treated successfully by washing out the stomach with a weak solution of nitrate of silver. He first introduces a 2 per cent. solution of bicarbonate of soda in sufficient quantity to come in contact with the entire gastric coat, and having evacuated this he next throws in a half litre, about seven-teen fluid ounces, of a 10000 solution of silver nitrate. He next withdraws a part of this and injects air so as to dilate the organs and bring the whole of its mucous surface in contact with the solution. As soon as the latter is observed to become milky in appearance, it is completely withdrawn and another half litre of a fresh solution introduced. Finally, the stomach is washed out with hot water, to which is added some chloride of sodium. M. Forlanini finds that the silver nitrate stimulates the mucous membrane, gives tone to the muscular walls, and diminishes the gastric distress, a marked diminution being observed in the production of mucus. This method of treatment is especially applicable to cases of chronic catarrh with dilatation.—*London Lancet*.

A CASE of interest to surgeons came before the Supreme Court of the State of New York, during a recent session in Plattsburgh. In May, 1888, a man, by a kick of a horse, supposed rupture of his left ligamentum patellæ. A surgeon attended him for two months or more, during a portion of which time the patient did some of his farm work. The union proved to be ligamentous, and was, perhaps, two and one-half inches long. The patient brought suit to recover \$10,000, for malpractice. At the close of the prosecution, counsel for defense moved a non-suit on the ground that the evidence had failed to show that the present condition of patient's patella was in any manner due to neglect or non-skillful treatment on the part of defendant. After some argument, the court decided to hear the defense and then give an opportunity for renewal of the motion. Much valuable expert evidence was given, to the effect that the result was a fair average, and that the defendant had properly treated plaintiff's fracture. As the evidence of both plaintiff and his expert was substantially the same as that of the defendant and his experts, the court directed the jury to bring in a verdict of no cause of action.—*Bost. Med. and Surg. Jour.*

APPLICATION OF ZOOLOGY TO LEGAL MEDICINE.—An interesting case of the applicability of zoological facts to legal medicine is related by M. Fallot, of Marseilles. In the month of June last some fishermen discovered, floating off the harbor of Marseilles, a corpse in an advanced state of decomposition. The tissues presented the transformation known as saponification. In certain places the skin had the mamillated appearance described by Devergie, while that of the skull and face was detached and floating. The articulations of the elbows, wrists, and phalanges were more or less laid open, and the question was, How long was the body in the water? Devergie's tables did not go beyond four months and a half. In the case under consideration the solution of the problem was furnished by the following: The débris

of the clothing, which yet covered the body, was covered with barnacles, and it is known that these crustacea fix themselves to floating objects during the months of April and May. As it was further noted that the body was covered with barnacles which varied sufficiently in size to be distinguished as belonging to two successive generations, it was concluded that the body had been in the water for at least thirteen months.—*London Lancet.*

THE ARREST OF ETHER DRINKING IN IRELAND.—We are very glad to be able to state from inquiries which we have recently made in well-informed quarters, that the baneful practice of ether drinking in Ireland has considerably fallen off; in fact it has been almost, if not quite, suppressed, chiefly as the result of the public attention drawn to the facts in the address delivered before the Society for the Study of Inebriety at the close of the last year by Mr. Ernest Hart, to which extensive publicity was given in the press. The attention of the Government was drawn to the facts, and steps were taken by direction of Mr. Goschen to impose such severe restrictions on the sale of methylated ether as made it almost impossible to retail it for drinking purposes. We hear, in fact, that the ether trade with Ireland has fallen into insignificance; the sales of one firm alone who were the chief offenders have, we believe, fallen off to the extent of 80 per cent. There is, of course, a legitimate use of methylated ether for freezing purposes and other commercial objects, so that a certain legitimate sale will continue. It is stated, however, that the devotees of this pernicious form of volatile intoxicant have been seeking to replace methylated ether by some similar cheap intoxicant, and it has been alleged that in a few cases the new methylated spirit is still potable to thoroughly demoralized toppers. We have before us a specimen. It makes an opaque and offensive mixture with water, and it does not seem to us that any but the most inveterate and determined drinkers would be likely to resort to this very unattractive and even filthy form of alcohol.

—*Brit. Med. Jour.*

IN the course of some additional remarks on death during chloroform anaesthesia (*Brit. Med. Jour.*) T. Lauder Brunton says:

"I must here draw attention to what I believe to be a grave fallacy in some experiments of my friend Prof. H. C. Wood, mentioned by him in his address on Anaesthetics at the Berlin Congress. A tracing which he there showed seemed to indicate most clearly that the action of the heart failed long before the respiration. I here reproduce, as nearly as I can remember it, the general effect of this tracing. In it we seem to see clearly a stoppage of the beats of the heart while the blood pressure sinks, and yet the respiration goes on freely. Now, I believe that the stoppage of the heart in this tracing is only apparent and not real, and that it is, in fact, due to a small clot of blood in the cannula which connects the artery of the animal with the kymograph. I have had many such tracings, and my experience has led me, whenever I got them, to disconnect the cannula and remove the clot. Had there been no clot, the stoppage of the heart would have caused the blood pressure to fall abruptly instead of gradually, as shown in the tracing exhibited by Prof. Wood.

In comparing the action of ether and chloroform, we found that the great points of difference between

them were, first, that ether was a less powerful anaesthetic than chloroform; and, secondly, that while neither of them paralyzes the heart when giving plenty of air, the heart would continue to beat much longer during asphyxia when combined with ether than when combined with chloroform. Chloroform is thus a more powerful agent, and, as I have already said on a previous occasion, it is like a sharp knife in the hands of the surgeon as compared with a blunt one. It is more efficient for good if properly handled; it is more powerful for evil if misused."

Dr. Wood now has a chance to explain whether or not Lauder Brunton is likely in the right in the cannula matter.

A RECENT article by Professor Tyndall is attracting considerable attention. Broadly stated, the object of the paper is to make known to the world that phthisis is a disease which is ordinarily spread by infection, instead of being hereditary. He founds his judgment upon a description by Dr. Cornet, of certain experiments which that investigator has made in the Sanitary Institute of Berlin, and of certain evidence which is quoted as showing that nurses and others brought into association with consumptive patients are specially liable to catch the disease. Dr. Cornet gives figures which show that a large proportion of nurses in the hospitals of Berlin are reported to die of consumption. It is stated that in the course of a quarter of a century, among an average of 4,020 attendants in 38 hospitals, there were no less than 1,320 deaths from some form of tuberculosis. In other words, there were 53 deaths per annum from this cause, or an average of 13 per thousand. These figures are in strange contradiction to the facts as to the great consumption hospitals in London. In the largest of all—namely, the Hospital for Consumption and Diseases of the Chest, at Brompton—there are over 300 patients, and the number of attendants averages 250. Yet in the course of twenty five years not a single one out of this large number contracted phthisis in the hospital, and just the same may be said, at any rate as regards a period of six or seven years, with respect to the numerous staff at the Hospital for Chest Diseases at Victoria Park. The air of both of these institutions is full of bacilli, a fact which has been tested in one of them by the collection of the microbes at one of the ventilators. It is thought that if consumption were infectious in the fashion suggested by Professor Tyndall, the medical men and nurses would not enjoy this immunity from attack. Another consideration put forward is that although hitherto consumption has not been generally regarded as an infectious disease, and therefore no particular precautions have been taken to prevent its spread, the mortality from it has of late years considerably diminished in England, whereas the fact that the population is constantly being concentrated in the towns, and therefore sick and healthy are more closely brought together than in rural districts, would if it were communicable favor its extension. Some notion of the improvement which has taken place may be gathered from the fact that the deaths from phthisis per million of the population, which were 2,475 per annum in the ten years, 1861–70, and 2,116 in 1871–80, had fallen to less than 1,600 in both 1888 and 1889. The feeling in England appears to be that much more evidence is wanting before the infectiousness of consumption can be regarded as conclusively proved.—*Am. Lancet.*

THE NEW TREATMENT OF CARCINOMA.—New methods of treatment designed for the cure of malignant disease are so frequently being brought under the notice of the profession, that we feel some apology is due for referring to some facts in connection with this subject which have been supplied to us by our Vienna correspondent. A few months ago Professor Adamkiewicz announced that by means of some experiments he had been able to arrive at a certain method for curing cancer. The excitement which this announcement made in Vienna was such that the Minister of Education was induced to invite the Professor to come to the Austrian metropolis for the purpose of testing his new treatment in one of the State hospitals. In a ward under the charge of Prof. Billroth, Adamkiewicz was permitted to experiment upon a patient who was believed to be affected with epithelioma of the upper and lower lids of the right eye. The history showed that the disease was rapidly spreading, and, under the circumstances, therefore, the case seemed a most suitable one for testing the value of the new treatment. On October 25th the Professor took the patient in hand, the result being that on November 12th the sufferer was discharged from the hospital—cured. In other words, after eighteen days treatment an epithelioma of the upper and lower lids was pronounced by Adamkiewicz to have perfectly cicatrized over. Naturally enough upon this matter Prof. Billroth had something to say, and what he has said can scarcely be deemed to be enthusiastically favorable to this latest form of cancer curing. Billroth remarked that he had no doubt about the case being one of epithelioma. It was true, also, that the growth had cicatrized at the center and in the periphery. But whether it was a growth possessing distinctly malignant characters was open to some doubt. No signs of secondary infection had been noticed, nor was there any enlargement of the nearest lymphatics. Again, it had repeatedly cicatrized after treatment by caustics and “scrapings.” Moreover, if the center only of the growth were scraped, leaving a bleeding surface, healing would take place there, while at the periphery the disease would continue to extend. Upon the whole, then, Billroth contended that Adamkiewicz’s treatment had accomplished nothing, and that our knowledge of the subject of the treatment of cancer had not been in any way advanced by these experiments. Prof. Kaposi admitted that he had treated the same patient fifteen years ago for the same kind of growth, and obtained a successful result by the application of caustic. He quite agreed with Billroth in the belief that the epithelioma was not a malignant formation in the usual acceptance of the term. He expressed a wish to know how Adamkiewicz performed his experiments—whether the injections were made locally or otherwise. Still more condemnatory of the new treatment were the remarks of Dr. Franks, who spoke on behalf of Prof. Albert. According to the latter observer, the experiments conducted in this clinique by Prof. Adamkiewicz appeared to have very little influence over the new growths, and he believed that massage or any other mechanical irritation would have the same effect in reducing the size of the tumors. There was nothing, in his opinion, in the new treatment which could be considered of any real value. Thus has this last new method of curing cancer been finally disposed of. We referred to the matter at length in our issue of August 5th in our Austrian correspondence, and from the cases which Prof. Adamkiewicz had then recorded it was naturally thought that his method should be submitted to a crucial test. This

test has now been applied, with a result which leaves no possible reason for doubting that the treatment is perfectly valueless for the purposes for which it was introduced.—*Med. Press and Circ.*

ACCIDENTAL HEMORRHAGE OCCURRING DURING THE FIRST STAGE OF LABOR AT TERM.—Since Dr. Goodell’s paper on this subject, some twenty years ago, there has been very little added to our information concerning it. It was not the writer’s purpose to discuss the entire subject of accidental hemorrhage in the gravid womb, but simply that form which occurs during labor, which is not only the more infrequent but the more fatal form, being rarely of traumatic origin. Five-sixths of the cases have been due to injury, and have occurred before term. The writer recited a fatal case in his practice.

He considered the etiology of these cases obscure, traumatism being the most frequent factor before labor. The predisposing causes were hemorrhagic diathesis, general febrile affections, renal troubles, death of foetus, hydramnios, diseases of the placenta. In 20 per cent. of the cases, irregular uterine contractions have been noticed. In a certain number of cases the cause was undoubtedly due to abnormal shortness or twisting of the cord. The accident could not be ascribed to a single etiological factor in the non traumatic case; there being usually a combination of several, as irregular and imperfect uterine contractions, with extensive fatty degeneration of the placenta. What combination may lead to hemorrhage it is difficult to state.

The symptoms are divided into two sets, initial and final, the majority of writers believing that only the latter are reliable, and are recognized too late to remedy. The writer considers accidental hemorrhage diagnosable at its inception by watching the initial symptoms, such as irregular and feeble labor pains.

Continuous pain in the lower part of the abdomen gradually growing worse and assuming a bursting character, is one of the symptoms. Nothing abnormal may be found on external palpation, but auscultation of the foetal heart shows it is feeble and irregular, an important symptom, indicating some serious disturbing influence to the foetus, not accounted for by ordinary prolonged labor. The case may be mistaken for one of a simple uterine inertia, the patient being able to sit up and walk about, her pulse not being affected. All these symptoms should lead the attendant to suspect a possible commencing hemorrhage. External bleeding would confirm the diagnosis; this symptom has been absent in three-fourths of the cases reported. The signs of internal hemorrhage now appear, and with the arrest of the labor the patient grows weaker, and may die at any moment, or the membranes may rupture, and she may be delivered, and afterwards die from post-partum hemorrhage or shock. The writer believed that death was not unfrequently due to hyper-distention of the uterus rather than to actual loss of blood.

Accidental hemorrhage may be mistaken for a severe attack of colic; but this error could hardly be made during the labor, if the condition of the uterus was carefully observed. It is distinguished from rupture of the uterus by the fact that the latter accident occurs during the progress of active pains usually before the rupture of the membranes, and is followed by a diminution in the size of the uterus, recession of the presenting part, and the sudden onset of symptoms of internal hemorrhage.

In order to save the mother and child, or even the mother alone, there must be a combination of favor-

able circumstances—skilled and prompt attendant, unusual resistance to shock in the patient, and, after delivery, proper uterine contractions.

The writer's plan of treatment was, as soon as the accident was recognized, to vigorously stimulate the patient by mouth, rectum, and hypodermically, while sending for aid. Under complete anæsthesia the os should be carefully dilated manually, Barnes' bags only being employed when the os was rigid, and the patient's condition was such that a certain amount of delay could be safely practiced; the membranes should be preserved intact; then version should be performed with unusual care to avoid rough manipulation. At this stage ergot should be freely administered hypodermically. There should be a short delay before extraction in order to give the uterus time to recover its tone. If the head is arrested by the poorly dilated os, it should be perforated, instead of wasting time in trying to drag it out. The most important step is the prevention of post-partum hemorrhage. Without delay the hand should be introduced into the uterus, the placenta and clots removed and the cavity tamponed with iodoform gauze.

—*Bost. Med. and Surg. Journ.*

INTESTINAL ANASTOMOSIS.—Since the introduction of Senn's method of intestinal surgery various operators have endeavored to modify the technique and apparatus. While some advantage has been gained, there has been much that has not proved of any material value.

I have written this paper to call attention to a few points that seem to be overlooked in the technique of this special branch. These are factors when rapidity is a necessity.

In my paper read before the Philadelphia County Medical Society, April 12, 1890, I discussed the value of the various rings in use at that time. This was based on a great number of operations. Since then I have found no reason sufficient to alter my first conclusions.

Brockaw's ring, for simplicity of manufacture, ease of introduction, and completeness of coaptation, has not been superseded. Senn's plate stands prominent in gastro-duodenostomy for maintaining firm coaptation and preventing stenosis by contraction. The stomach ring can be less decalcified than the duodenal plate, therefore resisting the action of the secretions for a longer period.

Dawbarn's vegetable plates are a new feature. They have the advantage of being easily obtained, and are easy of dissolution, but are impracticable, except when used in the method he suggests.

The time required for an intestinal anastomosis by lateral approximation is but ten minutes from beginning to end. The new methods have not decreased, but rather lengthened, the operation. This increase has been made by the efforts to render the opposing bowels more secure. Various sutures have been advised for this purpose. Operations frequently repeated have convinced me that if the approximation ligatures have been introduced at a proper distance from the incision in the bowel and properly tied, firm coaptation will be got sufficient to prevent fecal extravasation. It is in the tying of these ligatures where success lies.

If your assistant knows the technique he will give invaluable aid at this stage of the procedure. He will so bring the opposing bowel into relation that the lateral walls of the intestines will well overlap the point of ligature; then if the ligatures have been introduced at the proper place the knots will be

thoroughly hid. It is a fact that much fault lies in two defects in tying these ligatures either too tight or too loose, therefore necrosis by pressure or lack of firm coaptation.

To show the superfluity of complicated stitches I wish to make the statement, which experiments prove, that in an injury to the intestine, either by accident or design, paralysis occurs, consequently absence of peristalsis, therefore absence of gas and fecal matter in the portion of bowel operated on; distension does not occur, consequently no tension. As neither gas nor fecal matter can enter a paralyzed gut, we can readily see the uselessness of sutures to support. Obstruction from paralysis shows the paralyzed portion of gut empty and distention in the proximal portion.

Recognizing this fact, I have contented myself, when I thought additional security was necessary, by the introduction of two or four interrupted sutures around the area of approximation. These have given me all the results desirable.

I have advised an additional continuous suture in ileocollectomy by approximation, to give support, as I consider the approximation at this place unreliable, made so by the anasmic action of the colon.

I have had the most excellent results in gastro-duodenostomy by simple approximation, though I consider Weir's method as very advisable to prevent dragging.

Scraping of the peritoneum was advised by Dr. Davis, of Alabama. It has no advantage over scarification, and the possible advantage of exposing muscular tissue to muscular tissue. The intestinal tissues in obstruction are rendered exceedingly soft by extravasation and inflammation, and are easily removed. I have seen the most perfect union where neither scarification nor scraping had been done.

The scraping of the invaginated portion is unnecessary; it consumes time. I have seen the whole of the invaginated end entirely covered with plasma in dogs that had been killed four hours after operation. The sutures would be completely hid.

In sewing the invagination three whip-overs of a continuous suture will be sufficient. The mesenteric side is secured first by a snug knot, the forceps holding the inverted portion until the second whip-over is entered; then they are withdrawn.

The method of attaching the bowel before incision is unique. The advantages claimed are: better coaptation and prevention of fecal extravasation over coaptating surfaces. These are accomplished at an expense of time and labor.

The free use of distilled or boiled water will obviate any fear of septic infection. The introduction of the sutures and plate has not the same facility as the original method.

Coaptation is perfect if made so. Time is the object, security to the patient being understood.

—Shimwell, in *N. Y. Med. Record*.

FRENCH NOTES.

A. E. ROUSSEL, M.D.

THERAPEUTIC EFFECTS OF "EPHEDRA VULGARIS." (P. Bechino).—The author studied in the clinic of Prof. Popoff the effects of this plant: 17 grammes of stem, 34 grammes of root reduced to powder in a mortar, to which is added three litres of water and allowed to simmer for twelve hours, adding sufficient to allow for evaporation, after which it is placed over a hot fire for twelve hours additional, and then filtered.

If the quantity remaining be less than two litres, sufficient water is added to make up the amount. The author administered a teaspoonful of this decoction every two hours. The patients were as follows: Four cases of acute articular rheumatism, with one attendant, acute pericarditis; two cases of chronic articular rheumatism, six cases of chronic muscular rheumatism, two of acute muscular rheumatism, one of sciatica and one rheumatic osteomyelitis. The best results were attained in the cases of articular rheumatism and acute muscular. On the second day of treatment, the pains diminished, the pulse and respiration became more active. The fever disappeared on the fifth or sixth day. The articular swelling disappeared after nine or ten days. The one case of pericarditis observed in the acute articular rheumatism, equally disappeared. The quantity of urine increased in the cases of articular rheumatism. In chronic rheumatism, the results were less pronounced and less prompt. In four cases suffering from muscular rheumatism, the pains completely disappeared; in two cases they were greatly diminished. It is worthy of mention that the attendant constipation in some of the cases was entirely done away with.—*Bulletin de Therapeutique*.

A BULLET IN THE CERVICAL CAVITY FOR FORTY-THREE YEARS. (Dr. Laner).—The rifle bullet in question penetrated the skull in November, 1847, in the carotid portion of the temporal bone, and was followed by symptoms of eucephalitis, paralysis of the bladder, etc., which symptoms, however, gradually passed away.

The patient died of tuberculosis in February, 1891, and, at the autopsy, the ball was found covered with exostosis. The cerebral substance was depressed and hardened in the immediate neighborhood.—*Le Languedoc Medical*.

MEDICAL JOURNALS IN PARIS.—According to the report of the Minister of the Interior, there are at the present time published in Paris one hundred and forty-five journals of medicine and surgery, and eight of pharmacy. On the other hand, only one hundred and sixty-one political journals are published in Paris.—*Revue de Therapeutique*.

COMPARATIVE MORTALITY OF DIPHTHERIA.—England reports 41 deaths to 100,000 inhabitants. For the same proportion, Belgium has 44, Holland 53, Switzerland 59, Italy 79, France 80, Germany 100, Scandinavia and Russia, 110, Spain 112, Austria-Hungary 116, and America 140.

—*Revue de Therapeutique*.

INTERSTITIAL INJECTIONS OF OSMIC ACID IN GOITRE (Auerbach).—The author injects 1 demi-centigramme of osmic acid (in a solution of distilled water) in the tumor every second day, and applies daily massage, for fifteen minutes. Iodide of potassium is administered internally at the same time. At the end of three weeks the tumor is diminished by half its volume, with disposition of subjective symptoms.

THIOSULPHATE OF SODA IN GASTRO-INTESTINAL ANTISEPSIS.—According to Goll, the above remedy is superior in its disinfectant effects to resorcin, and all other stomachics. He also strongly recommends its use as a purgative, in association with infusion of senna.

THYOL FOR CONSTIPATION.—

R.—Thyol..... grs. 10.
Bread crumbs..... " 10.
M.—Make 10 pills.
Sig. One pill to be taken each day.

—*La Medicine Moderne*.

GERMAN NOTES.

HERMAN D. MARCUS, M.D.

ADMINISTRATION OF CHLOROFORM.—Dr. Otto Zuckerkaudl reports the manner of chloroform administration as practised in Prof. Diltel's clinic (Vienna allg. Krankenhaus). The chloroform is slowly poured on the mask, drop by drop, until patient is anæsthetized. By this method only grs. ix are used in the minute, while grs. xv are used if the chloroform is poured on by the method in vogue.

The chloroform is kept in bottles containing about 3iij, which bottle is closed by a perforated glass stopper.

The advantages of this method are:

1. The diminished amount of chloroform.
2. The gradual narcosis, without any disturbing symptoms.
3. On account of this, a quiet course.

—*Centralbl. f. Chirurgie*.

HAY FEVER.—

R.—Acid. boric pulv..... 3ss.
Natri. salicyl..... gr. vj.
Cocain. hydrochlor. pulv..... gr. ij.
M.—Ft. pulv.
S. For external use, to draw into nose.

For the complaint of the eyes use washes of zinc or copper sulphate. Inhale 10 drops of ethyl of iodine, or 3 drops of nitrate of amyl; also, change of air.—*Pharm. Post*.

LARYNGISMUS STRIDULUS.—

R.—Chloroformi.... gtt. v-x.
Aqua dest..... 3v, 3iv.
Glycerini..... 3iv.
M.—S. A teaspoonful every half hour.

TO REMOVE CONDYLOMATA.—

R.—Ac. salicyl..... 3ss.
Ac. Acet..... 3viiss.
M.—S. Use locally. Apply on parts with small brush twice daily.

—*Der ærtzl. Praktiker*.

CONDYLOMA ACUMINATA.—Dr. A. Szempin (Berlin) recommends for condyloma acuminata in females, the following:

R.—Herb. sabin. pulv..... 3iijss.
Hydrarg. præc. rubr.,
Alum. ust..... āā 3j.
M.—S. Powder on parts twice daily.

This treatment is borne very well if excoriations of the vulva do not exist. Besides this, astringent and cleansing vaginal irrigations must be used.

AN excellent formula for irrigation in colpitis gonorrhoeica, after the first inflammatory stage is passed, is:

R.—Ac. tannic..... 3v.
Glycerini..... 3viiss.
M.—S. One tablespoonful to two pints of water.

—*Der ærtzl. Praktiker*.

TO PREVENT IRRITATION AFTER THE USE OF
SUBCUTANEOUS ERGOTINE INJECTIONS. — Bredert
recommends the following formula :

R.—Ergotine gr. xv.
Aq. dest. Div.
Ac. carb. cryst. gr. $\frac{1}{2}$.
M.—S. For subcutaneous injection.

—*Allg. Med. Central. Zeitung.*

Medical News and Miscellany.

ODE TO THE BICHLORIDE OF GOLD CURE.

BY X. HUNT DIPSO.

An Agony in Three Fits and a Spasm.

FIT I.

Now Patrick Maloney, from County Kildare,
Was strongly addicted to rum ;
So much so that folks had been heard to declare
That Pat was a bibulous bum.

Sometimes he'd brace up for two months at a stretch,
And his friends on his conduct would brag,
When all of a sudden this ill-fated wretch
Would show up with a beautiful jag.

They'd curse him, they'd coax him, they'd send him to jail,
His name he'd attach to the pledge ;
But all these means to reform him would fail ;
He'd go off and get tight as a wedge.

Some said that his weakness was due to disease,
Some said it was original sin ;
And while they were tackling such problems as these,
Pat was flooding his system with gin.

At last, when his friends had forsaken him quite,
And the last of his comrades grew cold,
Somebody suggested a journey to Dwight
To try the bichloride of gold.

Poor Bridget, his faithful, long-suffering wife,
Besought him, with many a sob,
To give Dr. Keeley the chance of his life
To do a magnificent job.

She fished from her stocking a hundred or so
That she'd garnered in happier days,
And told him what joy it would give her to know
That her darling had mended his ways.

FIT II.

Six weeks passed away and her Patrick returned ;
She flew to his arms like a bride ;
But a look of disgust on his face she discerned,
And his arms remained limp at his side.

Sure, never before had Pat acted like this,
For, even when full to his ears,
He had always delighted in conjugal bliss,
And his ardor had grown with his years.

But his breath was deodorized, praised be the saints !
And his nose wore a temperance hue ;
So Bridget bore up without making complaints,
As she thought 'twas her duty to do.

But through the long hours of that terrible night,
As Pat slept with his face to the wall,
Bitter thoughts of a rival—some charmer at Dwight—
Kept Bridget from sleeping at all.

FIT III.

Six months rolled around, and Maloney's reform
Was accomplished beyond any doubt ;
But his love that once burned for his Bridget so warm,
Like the fire of his youth had gone out.

At last, in a wild burst of grief, she implored
That he'd tell her what made him so cold.
"Be jabbers! me darlin', I'm thinkin'," he roared,
"It's that dev'lish bichloride of gold."

For women and wine are so closely allied
As the source of a man's pleasures and pains,
No antidote Nature can ever provide
Will bar one while the other remains.

Then Bridget Maloney rose up in her might,
And she cursed that bichloride of gold ;
She cursed Dr. Keeley, his drug-store at Dwight,
And all who his "treatment" upheld.

SPASM.

That night, had you entered the door of their flat,
This fact you'd have to record :
That Bridget was safe in the arms of her Pat,
And Patrick as drunk as a lord.

—*Western Medical Reporter.*

DR. E. L. B. GODFREY, of Camden, has been
elected President of the New Jersey, Sanitary Asso-
ciation.

THE Pasteur Institute treats yearly 1500 to 1800
patients who have been bitten by animals supposed
or recognized to be mad. The Rabies Service is
directed by MM. Grancher, Chantemesse and Charrin.

THE Canadian government has warned steamship
companies that it cannot undertake to provide for
destitute immigrants at the public expense, and that
the companies may be ordered to return them.

—*Bost. Med. and Surg. Jour.*

It is stated that Sir Morell Mackenzie has entered
actions for \$10,000 damages against two United States
firms, which, it is alleged, have used his name with-
out authority in connection with medical specialties.
—*Canad. Pharm. Jour.*

THE man without any music in his soul should be-
come acquainted with Dr. Hachenberg, of Austin,
Texas. When the doctor starts off his ten pianos by
means of electricity, what a volume of music will
ascend heavenwards!—*Electrical Review.*

Is the doctor a convert to the musical cure theory?
If so, he evidently does not stop at halves.

OUR bright California contemporary, the editor of
the *Pacific Medical Journal*, after detailing the case of
an arrogant and ignorant physician of that State, who
lately cut a child's arm off the moment it appeared at
the vulva, for no reason, apparently, other than it
was not the proper part to present itself first, charitably
wishes that he had been granted an opportunity some
months since to write that practitioner's obituary.

It is said that the chemist of the New York Board
of Health has discovered one thousand and forty-five
specific nuisances on the Croton water-shed, whence
comes the water supply of New York city.

—*Am. Lancet.*

This reminds one of what Coleridge said of the
ancient city of Cologne. In going by he testified to
detecting

"Two and seventy stinks, and several stenchcs."

At the annual meeting of the York State Medical
Association, held in New York on October 28th to
30th, the J. G. Orton Prize of \$100 for the best short,
popular essay on some subject connected with prac-
tical sanitation was awarded to Dr. Howard Van
Rensselaer, of Albany, for an essay on "Impure Air,
and the Ventilation of Private Dwellings."

—*Bost. Med. and Surg. Jour.*

THE "Papyrus Ebers" is said to be the oldest medical work in the world, dating 1550 years B.C. It has lately been translated into German by Dr. Heinrich Joachim. It consists mainly of receipts, interspersed with proverbs. In some passages advice as to the examination of patients is given. In other places the prognosis indicated by certain symptoms is given. By it we learn that the old Egyptian physicians practiced palpation of the abdomen.—*Am. Lancet.*

NOVELTY AT THE CHICAGO EXHIBITION.—The forthcoming "World's Fair" at Chicago is to be graced by a novelty which is in process of manufacture by a Pittsburg medical man. This consists of an immense papier-maché model of the human heart. It will be three feet in diameter. We trust that precautions will be adopted to prevent the left ventricle of this model from being mistaken for a retiring room.—*Ex.*

REDUCTION OF FARES FOR HOSPITAL PATIENTS.—The Paris Municipal Council has asked the Prefect of the Seine and the Prefect of Police to make permanent arrangements with the railway, omnibus and tramway companies, for the reduction of fares in the case of children and old people on their way to and from hospital, and the members of their families who go to see them. The Council is anxious to have the same privilege extended to the pensioners of Bicêtre, Ivry, and Bersannes, and to the inmates of the Ormesson Hospital.—*Brit. Med. Jour.*

It fairly makes one dizzy to read the account of a California reception to a young lady, written by the inspired pen of a California medical man. Notice just three sentences: "Amid all this loveliness, however, none was fairer than she to whom all had come to pay homage. Delicious refreshments were served, after which fairy figures, tightly held by brawny hands, flitted nimbly over the floor to the time of Strauss and other terpsichorean composers. Thus the hours whiled away, as in an enchanted castle, until eleven o'clock, when the guests departed, with the feeling that they had spent a most delightful evening."

THE Japanese Minister to the United States and Mexico, Mr. Gōzō Tateno, has recently pointed out some interesting philological similarities between the ancient Aztecs and the Japanese. There is nothing new in the theory of the noble red man's descendancy from the Japanese. It may be that the ancient red maritime race of Japan (which we still find in its purity), before Zimmou's conquest, and before the introduction of Indonesian white and negritoid elements, emigrated to America. The perfect knowledge of irrigation which the Aztecs possessed has, to my mind, something peculiarly Japanese; for at the time when such a settlement would have taken place—say, in the fifth century—the Japanese mind was very much exercised with this kind of problems. The gentle disposition, for which the Incas are famed, seem to imply an earlier date of immigration than that of the Aztecs, admitting that they both came from the other side of the Pacific.

The question of the presence or absence not only of syphilis, but also of leprosy, is, in this connection, of the greatest interest. It is generally supposed that Europe received her own share of syphilis through the followers of Columbus; and, in that case, the disease was indirectly imported from East Asia. On the other hand, must not South American leprosy be traced back to the same origin?

—*Sei-I-Kwai Med. Jour.*

THE forthcoming January (1892) number of the *Alienist and Neurologist* will contain "Neurasthenic Rudimental Impulsive Paranoia," by Prof. Enrico Morselli, Italy; "The Work of Medicine for the Weal of the World," by C. H. Hughes, M.D., St. Louis; "Some Cases of Hemiplegia," by John Ferguson, M.D., Toronto, Canada; "Relations of Chorea and Epilepsy," by G. R. Trowbridge, M.D., Danville, Pa.; "The Virile and Other Reflexes," by C. H. Hughes, M.D., St. Louis; "Diagnosis and Nature of Certain Functional and Organic Nervous Diseases," by J. T. Eskridge, M.D., Denver; "Traumatic Neurosis in Damage Suits," by H. T. Pershing, M.D., Denver; "Present Aspect of Cerebral Surgery," by L. C. Gray, M.D., New York city; "Visual Imagery of Alcoholic Delirium," by C. G. Chaddock, M.D., Traverse City, Mich.; "Insanity and Genius," by Jas. G. Kiernan, M.D., Chicago.

Besides the usual selections, editorials, hospital notes, reviews, etc.

Subscription, \$5.00 per annum; single copies, \$1.50.

C. H. HUGHES, M.D., *Editor*,

500 N. Jefferson ave., St. Louis.

HUXLEY ON THE AIM OF LIFE.—In a recent autobiographical sketch, Prof. Huxley says: "The last thing that it would be proper for me to do would be to speak of the work of my life, or to say at the end of the day whether I think I have earned my wages or not. Men are said to be partial judges of themselves—young men may be, I doubt if old men are. Life seems terribly foreshortened as they look back, and the mountain they set themselves to climb in youth turns out to be a mere spur of immeasurably higher ranges when, with failing breath, they reach the top. But if I may speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these: To promote the increase of natural knowledge, and to forward the application of scientific methods of investigation to all the problems of life to the best of my ability, in the conviction, which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and of action, and the resolute facing of the world as it is when the garments of make-believe, by which pious hands have hidden its uglier features, are stripped off. It is with this intent that I have sub-ordinated any reasonable, or unreasonable, ambition for scientific fame which I may have permitted myself to entertain to other ends; to the popularization of science; to the development and organization of scientific education; to the endless series of battles and skirmishes over evolution; and to untiring opposition to that ecclesiastical spirit, that clericalism, which in England, as everywhere else, and to whatever denomination it may belong, is the deadly enemy of science."—*Med. Rec.*

THE Second Annual Session of the Association of Military Surgeons of the National Guard of the United States, will be held at St. Louis, April 19, 20, and 21, 1892. An interesting programme of addresses by prominent surgeons of the National Guard and the United States Army has been arranged, and a goodly number of scientific papers on Military and Accidental Surgery will be read and discussed, and all matters pertaining to the health, usefulness and welfare of the civilian soldiers will receive attention.

The afternoon of one day will be set apart for an object lesson from the "Manual of Drill," by Hospital Corps of the United States Army, detailed for

this purpose. This will be a very important, as well as instructive feature of this session. The evenings will be given up to entertainments, receptions, and banquets, which the medical profession and generous citizens of St. Louis have planned for their distinguished guests. The committee of arrangements have received the assurance that transportation will be satisfactorily reduced on all railroads and steamboats, to and from this meeting. The several hotels have promised a low and uniform rate, which will be announced at an early date. It is anticipated that not less than 500 surgeons and assistant surgeons of the National Guard of the United States will be in attendance, to all of whom the committee of arrangements extend a most cordial welcome.

A LETTER OF PROFESSOR VIRCHOW.—Professor Virchow has published the following letter: "The completion of my seventieth year has been a cause of rejoicing to my friends more than to myself. Age, even when it does not make its full burden felt, hints at the need of resignation. My friends, however, resolved that I should once more enjoy, on my birthday, a general survey of my past life, my endeavors, my labors, my successes. And they have had their way. From almost all parts of the world the heartiest congratulations, many splendid gifts, not a few high, even the highest, honors have come to me. A series of festal days elapsed, and I have not even read all the letters and documents; nor estimated the measure of the recognition and attachment dedicated to me. Playmates of my early youth, schoolfellows, fellow-laborers from all directions and countries, down to my youngest pupils in the laboratory, have appeared to congratulate me. It is impossible for me to thank each individual and each body as I should like, and to tell them how happy and honored I feel that so much friendship, so much love, so much good will, still is felt for me, and how much I wish that none of it may be lost during the remainder of my life. I trust I may be permitted to express my feelings in this general letter. Only one thing I will add. My friends may rest assured that their recognition will not corrupt my heart, and that I cherish no dearer hope than that I may be permitted to consecrate my powers yet awhile, as before, to the cause of science and mankind.

"RUDOLPH VIRCHOW."

WE submit the following *bona fide* Chinese patent medicine advertisement to the proprietary medicine manufacturers of America, in order to emphasize the fact that if they wish to equal their Oriental brethren it will be necessary to rise betimes in the morning.

"This receipt has come down to us from a physician of the Ming dynasty. A certain official was journeying in the hill country when he saw a woman passing southward over the mountains as if flying. In her hand she held a stick, and she was pursuing an old fellow of a hundred years. The mandarin asked the woman, saying, 'Why do you beat that old man?' 'He is my grandson,' she answered; 'for I am five hundred years old, and he one hundred and eleven; he will not purify himself or take his medicine, and so I am beating him.' The mandarin alighted from his horse, and knelt down and did obeisance to her, saying, 'Give me, I pray you, this drug, that I may hand it down to posterity for the salvation of mankind.' Hence it got its name, the 'Fairy Recipe for Lengthening Life.'

"It will cure all affections of the five intestines and derangement of the seven emotions, constitutional

debility, feebleness of limb, dimness of vision, rheumatic pains in the loins and knees, and cramp in the feet. A dose is one-quarter ounce. Take it for five days, and the body will feel light; take it for ten days, and your spirits will become brisk; for twenty days, and the voice will be strong and clear, and the hands and feet supple; for one year, and white hairs become black again, and you move as though flying. Take it constantly, and all troubles will vanish, and you will pass a long life without growing old. Price per bottle, 3s. 3d."

BURIED ALIVE.—Last week, a young woman near Montauban fell ill, and after a few days she died, to all appearances. However, the woman who was employed to arrange the body for the burial remarked that the bed was warm. For the moment she did not speak of it, but when the coffin was lowered into the grave and the earth nearly all shovelled in, she related what she had observed, and immediately the husband caused the coffin to be broken open. He found his wife breathing stertorously, and her fingers torn in the struggle to release herself from the awful position. She was immediately carried back to the house and doctors sent for, but she died towards evening, this time for good. The affair caused, naturally, a great sensation in the district. Such deaths are, unhappily, too frequent in France, where, by law, burial must take place within thirty-six hours, unless a special application be made for delaying the funeral. A medical man of some celebrity declared that out of 800,000 or 900,000 deaths, 27 were apparant, and consequently 27 were buried alive! This number would be much greater if some providential means did not intervene to snatch persons from this frightful death. Sometimes the supposed dead awakened of themselves, just at the moment they were being put into the coffin; at other times a noise in the coffin awakened suspicion and was the means of saving the unfortunate occupant. The list would be too long if I were to enumerate and give the names of all those who narrowly escaped being buried alive. It is well known that the celebrated anatomist Winslow was twice buried alive during his childhood. A young priest who was watching beside the "death-bed" of a young girl, gave a parting kiss. The contact of his lips caused the girl to open her eyes, to the great astonishment of the young abbé. The resurrection was so remarkable that the priest felt himself constrained to put aside his *soutane* and marry her. At the beginning of this century a young journalist fell head and ears in love with a married woman, who shortly afterwards fell ill and "died." The night following the burial he stole to the grave to cut off a lock of her hair. When he opened the coffin he remarked that she was staring him in the face. The thought flashed through his mind that she was not dead; he got her carried to his house, and she recovered. The most curious part of the story was, that twenty years subsequently her husband met her and recognized her. He applied to the courts to obtain his rights over her, but the court refused to listen to him and the case was dismissed. A statistician has collected ninety-four cases within the last thirteen years of persons who escaped from being buried alive by most extraordinary circumstances; but how many more were really buried, especially in country districts, where the doctor relies on the testimony of the parents or friends of the patient! It is unnecessary to say that the law in such cases should be very strict, and that no certificate should be given without the presence of manifest signs of death, and

the most conclusive of all is the greenish hue on the abdomen, resulting from decomposition. It is fearful to think that some unfortunate is writhing, perhaps as I write, in the throes of agony six feet underground.—*Med. Press and Circ.*

A PRIZE OF 1,200 francs, or \$240, has been offered by the Société Médicale des Hopetaux for the best essay upon Artificial Feeding of Infants. The competitive papers must be sent to Secretary of Société not later than July 1, 1892.

EDISON says "the steam locomotive must go!" So far as we can see it is going—going faster all the time. Recently it has been going at the rate of a mile a minute and even better. The trouble with his electro-motor is that it talks, but doesn't go.

—*Safety Valve.*

PROGNOSING THE SEX OF THE CHILD.—Dr. Ross, of Belfast, says that he can foretell the sex of the child from the place where the mother feels the fetal movements most distinctly. If she feels them chiefly on the right side the child will be a girl; if on the left side, a boy.—*N. Y. Med. Rec.*

THE OTHER MAN LAID ON.—Minister: "Who is the deceased?"

Attendant: "Oh, he was a faith healer. He used to go about the country laying on of hands, but one day he laid hands on the wrong man; there was a reaction, and the result was fatal to the healer."

CURRIER relates a case recently under his care. A young lady, nineteen years of age, applied to him for relief from cystitis. He sounded the bladder and thought he detected evidences of stone. He then opened the bladder through the vagina, and on introducing his finger withdrew a hairpin.

She was not as confiding as a Texas girl was to us many years ago, says the editor of the *Country Doctor*. We removed a cologne bottle from her vagina. She informed us she "accidentally swallowed it when a child, and was afraid to let it be known, as her parents might make her have it cut out!"

DISAGREEING BACTERIOLOGISTS.—There is a beautiful "row" in the German bacteriological world, and all about tuberculin. Professor Koch, in his recent communications about this interesting substance, reproaches his colleagues for not making investigations themselves instead of waiting for him to finish the work. He ignored the fact that such work had been done by Cheyne and Hunter, Nencke and Hammer-schlag, and others. Therefore, Professor Koch now receives a merited visitation of wrath from Professor Hueppe. This latter gentleman asserts that Koch's two recent communications contain nothing that had not been independently shown by others, while they do not go so far even as other work has in the isolation of the active principle of tuberculin. He quotes Professor Koch's earlier criticism of M. Pasteur against his own present methods of publication of his researches. Finally, Dr. Hueppe deals severely with the accusations brought by Professor Koch against bacteriologists in general, and shows how ill-founded they are.

HOW TO COOK A HUSBAND.—More than a decade ago, in the Baltimore Cooking-School, the following recipe for "Cooking a husband so as to make him tender and good," was contributed by a lady, presumably of experience. We commend it to our lady readers:

A good many husbands are utterly spoiled by mismanagement. Some women go about it as if their

husbands were bladders, and blow them up. Others keep them constantly in hot water; others let them freeze by their carelessness and indifference. Some keep them in a stew by irritating ways and words. Others roast them. Some keep them in pickle all their lives. It cannot be supposed that any husband will be tender and good managed in this way, but they are really delicious when properly treated. In selecting your husband you should not be guided by the silvery appearance, as in buying mackerel, nor by the golden tint, as if you wanted salmon. Be sure and select him yourself, as tastes differ. Do not go to the market for him, as the best are always brought to your door. It is far better to have none unless you will patiently learn how to cook him. A preserving kettle of the finest porcelain is best, but if you have nothing but an earthenware pipkin it will do, with care. See that the linen in which you wrap him is nicely washed and mended, with the required number of buttons and strings nicely sewed on. Tie him in the kettle by a strong silk chord called comfort, as the one called duty is apt to be weak. They are apt to fly out of the kettle and be burned and crusty on the edges, since, like crabs and lobsters, you have to cook them while alive. Make a clear, steady fire out of love, neatness and cheerfulness. Set him as near this as seems to agree with him. If he sputters and fizzes do not be anxious; some husbands do this till they are quite done. Add a little sugar in the form of what confectioners call kisses, but no vinegar or pepper on any account. A little spice improves them, but it must be used with judgment. Do not stick any sharp instruments into him to see if he is becoming tender. Stir him gently; watch the while, lest he lie too flat and close to the kettle, and so become useless. You cannot fail to know when he is done. If thus treated you will find him very digestible, agreeing nicely with you and the children, and he will keep as long as you want, unless you become careless and you set him in too cold a place.—*Ex.*

TO CONTRIBUTORS AND CORRESPONDENTS.

ALL articles to be published under the head of original matter must be contributed to this journal alone, to insure their acceptance; each article must be accompanied by a note stating the conditions under which the author desires its insertion, and whether he wishes any reprints of the same.

Letters and communications, whether intended for publication or not, must contain the writer's name and address, not necessarily for publication, however. Letters asking for information will be answered privately or through the columns of the journal, according to their nature and the wish of the writers.

The secretaries of the various medical societies will confer a favor by sending us the dates of meetings, orders of exercises, and other matters of special interest connected therewith. Notifications, news, clippings, and marked newspaper items, relating to medical matters, personal, scientific, or public, will be thankfully received and published as space allows.

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The Times and Register.

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FRACTURES AND INJURIES OF THE SPINE IN THE CERVICAL REGION.¹

By DE FORREST WILLARD, M.D.

Surgeon Presbyterian Hospital; Clinical Professor Orthopedic Surgery University of Pennsylvania, Philadelphia.

THE following group of injuries to the spine, taken in connection with the cases of laminectomy reported by me in the *Transactions of the College of Physicians*, Philadelphia, January, 1890, and February, 1891, show that the prognosis in the majority of the cases of injury to the spine is determined almost entirely by the initial lesions—i.e., the amount of injury which has been primarily inflicted upon the cord. In nearly all cases of spinal fracture the substance of the cord receives severe contusions or lacerations, and the resultant symptoms are not only dangerous, but it frequently happens that death ensues in a short time.

The first case shows that even very positive bone injury in the cervical region may produce symptoms of but moderate severity, provided the cord be uninjured.

Fracture of third Cervical Vertebra—E. R. male, aged thirteen years, fell through an elevator shaft some thirty feet. He was picked up unconscious and removed to the hospital. Upon examination, a large hæmatoma was discovered over the occiput, but there were no external evidences of injury. The head was retracted and turned markedly backward; it could be bent only slightly from side to side. Rotation was possible only to a slight degree. A finger passed into the mouth discovered a distinct prominence behind the posterior wall of the pharynx, corresponding

to the third cervical vertebra. The rigidity of the neck muscles was great. There was no paralysis, no cough, no loss of sensation, nor could crepitus be discovered. There were no evidences of severe pressure upon the cord. Flexion, extension, and rotation were almost impossible.

Under strong extension and counter-extension, applied upward from the head and downward from the body, the deformity was markedly reduced. A plaster-of-Paris collar, applied while extension was maintained was accurately fitted, so as to keep the head in a fixed position. This bandage was arranged so as to press on the occiput as high as the prominence, also to press upon the mastoid and temporal bones, and to curve forward so as to encircle the lower jaw. It then accurately fitted the neck from whence it extended to the shoulders and passed down loosely to envelop the upper part of the thorax. This maintained the head accurately in position and prevented any movement of the upper portion of the trunk, neck, or head. This was applied in place of extension and counter-extension on account of the sensitive condition of the hæmatoma over the occiput. After the tenderness from the blood tumor has disappeared, weight and pulley extension were applied to the head and feet, up to the point of comfortable endurance. The plaster envelopment was sawn open and permitted to remain as a splint to prevent lateral rotation and flexion.

He was kept in this position for six weeks. There was no impairment of motion or sensation during this time. The extension apparatus was then removed, and an accurately fitted neck splint of plaster-of-Paris was applied. He wore this with comfort six weeks longer. At the end of this time, examination of the pharynx showed that while there was still a slight prominence in the posterior part of his throat, the deformity was much less evident than at the time of the injury. There was still less rigidity, but no devia-

¹Read at the Philadelphia County Medical Society, December 9, 1891. For discussion, see page 553.

tion of the vertebral column could be discovered. The absence of pressure-symptoms resulting from the injury was a point of special interest. A year later he could move his head in all directions, although motion of the chin to the right was limited. Flexion seemed perfect. It is but seldom that a patient either breaks or dislocates his neck without more serious symptoms.

Cervical Spinal Hemorrhage.—W. M., aged eighteen years, was injured by diving eighteen feet into a pool of water two feet deep. He struck his back and the back of his head on the bottom of the pool. He was immediately pulled out by his comrades and was found to be unconscious. He remained in this state two hours. When first seen, some time later, he was blanched and pale, and complained of a pain in the back of his neck and beneath the shoulders. Sensibility was present throughout body and legs but apparently diminished. There was no opisthotonos, and no rigidity of the neck other than that motion gave slight pain. There was no tenderness over the region of the spinal cord, except slight pain in the lower cervical region. There was no visible displacement of the vertebrae, and no positive evidence of dislocation or of fracture. Flexion, extension, and rotation of the head were perfect and accompanied with only slight pain. The spinal column could be flexed and extended normally. Motion and extension in both arms, body, and legs seemed in good condition, except as regards sensibility as above noted.

He was partially conscious and could answer questions intelligibly, but with an apparent effort of the will, and his speech was slow. There was anaesthesia of both hands, especially on the ulnar side. He complained of pain in the region indicated. There was constant and decided priapism.

This condition continued until about seven hours after the accident, when he slowly seemed to lose power of the hands and forearms on both sides, commencing apparently in the region supplied by the ulnar nerve. Also there was progressive loss of sensation in both hands and forearms. Both brachial plexuses were sensitive to the touch, but not painful. Priapism still continued, but the urine was voided naturally. The scrotum was anaesthetic and remained so for several days, and uncertain areas of the abdomen seemed in the same condition, but his answers to questions were not very satisfactory. The legs retained both motion and sensation although both functions were apparently diminished.

The patient seemed to rouse from his unconsciousness at the end of the first hour and was moderately intelligent.

Up to this time extension made upon the spinal column by means of the head gave relief from pain, therefore, an extension and counter-extension apparatus was applied to the head and extremities, and continued traction was maintained.

Loss of motion and sensation increased during the next twenty-four hours until the patient was able only to move his arms feebly; fingers immovable. Sensation was entirely absent in both hands in the region supplied by the ulnar nerve. Sensation was impaired in other regions of the forearm and hands.

During the next two days there was apparently no change either as regards motion or sensation, but on the following day both functions began slowly to return.

At the end of the fifth day he could raise his arms, but only for a moment. When the extensor muscles were required to fulfill their functions the arm immediately fell. There was still a tendency to priapism, but the condition was not constant; the scrotum was

still anaesthetic. Temperature, pulse, and respiration remained unaltered.

Continuous extension was maintained, and as there was no paralysis it was deemed probable that all hemorrhage within the canal had ceased.

Motion and sensation returned to a slight degree in the thumb and fingers of the hand and in the arm, until gradually both functions were restored almost entirely. The scrotum remained anaesthetic for ten days.

Fifteen days later he could grasp an object with considerable firmness.

A trapeze was rigged over the bed so as to exercise the arms while extension was being maintained. An ischio-rectal abscess discharged for two weeks and then healed.

In eight weeks had thoroughly recovered and presented no abnormal symptoms. Motion and sensation complete.

A peculiar condition regarding this case was that after the condition of shock had passed away there were no serious symptoms until the probable occurrence of hemorrhage had begun to make pressure upon the spinal cord and thus to interfere with its functions. The occurrence of paralysis upon both sides instead of upon one, and the length of time after the injury showed that the symptoms must have been largely due to gradual compression.

Fracture of the Odontoid Process of Axis, with Dislocation of Atlas.—C., aged eighteen years, fell twenty feet, striking upon his head. He was picked up stunned, but soon regained consciousness. He was able to walk to his home, several squares distant, and to talk with his friends. An hour and a half later he was perfectly rational, talked freely and pleasantly, and complained of no pain when at rest; he simply desired to be permitted to sleep. He was quiet, but would suddenly start with an anxious look. The trunk and extremities were cold; pulse 85, feeble. Pupils equal, but failed to respond readily to light. The head was thrown backward with the occiput to the right, but he complained of no pain. The chin protruded, and the thyroid gland was prominent. Any movement or rotation of the head toward the right was accompanied with pain. Motion to the left was painless for a quarter of a circle; but any greater motion caused discomfort. There was no contusion or laceration of any part of the body; no depression of the skull, nor any evidences of fracture of the cranium. Pressure over the cervical region gave severe pain. The spinous processes of the cervical vertebrae were in line up to the third, but above this was a marked depression, while a little higher the position of the atlas was slightly projecting to the right of the median line. Manipulation caused so much pain that ocular examination of the pharynx could not be made. Digital examination revealed a slight prominence of the second vertebral body.

Diagnosis.—Dislocation of the axis from the atlas; probable fracture of odontoid.

During the night he slept at intervals, but roused at the slightest noise. There was no pain, except upon movement of the head.

In the morning he took nourishment, and complained of no suffering. He ate a light breakfast, and was anxious to go to his business. Three hours later he began to grow drowsy, and in two hours became semi-unconscious, but could still be roused. He answered questions intelligently, but closed his eyes as soon as he had ceased speaking. The tongue was protruded straight from the mouth, and with

difficulty; the pupils responded to light; the right eye was a little more responsive than the left. There was no paralysis, except of the bladder, the urine not having been passed since the accident. The catheter secured eight ounces of apparently normal urine. Pulse was 80, full; respiration 16, deep, but not snoring.

Twenty hours after the injury the pulse was 48; respiration 12, somewhat stertorous, not puffy nor blowing. Could be roused only with effort. Answered unintelligibly; occasionally, however, an articular word escaped. He constantly pulled at the bedclothes. The urine dribbled. Pupils were nearly the same size, but the left responded more readily to the light. At the junction of the forehead with the hair, for an inch and a half to the left of the median line, apparently the point where the head came in contact with the ground in the fall, the scalp was oedematous and there was a slight depression. Pressure upon several points in the same region gave similar pitting. No evidence of fracture.

No injury could be discovered in any portion of the body save the neck.

There was no paralysis of any portion of the body, but there was slight impairment of motion of the right arm and leg. The head could be moved with little more freedom toward the left, but a slight force caused the patient to cry out and to steady his head with his left hand. There was rather less deformity than at first at the back of the neck; the thyroid was not so prominent. Liquid food was taken without difficulty. He passed a restless night, constantly pulling at the bedclothes, tossing about on his couch, and muttering in delirium.

Forty hours after the injury it was noticed that he moved the right arm and leg less frequently, although both members could still be brought into use by a special effort of will. Pupils as the day before; respiration also; pulse 60. The patient responded to loud shouting, but could give no intelligible answers, although frequent attempts at utterance were made. The urine dribbled constantly.

Seventy-two hours after the accident the pulse was 100; respiration 20. Increased loss of power, but members still capable of being moved.

Eighty-four hours after the injury the pulse was 130, feeble; respiration 24. Delirium less violent. Patient remained quiet, except when partially awakened. When roused by any cause the left hand still pulled the bedclothes. The right arm and leg were still capable of being moved slightly, but the muscular power was weakened. Unconsciousness increased with total inability to speak. Bowels not moved since the accident. Pupils normal in size, still contracting under the influence of light. Liquid nourishment had been swallowed up to this time, but was now refused. Died quietly ninety-eight hours after the injury.

Post-mortem.—Examination of the neck alone was permitted. The posterior cervical muscles were filled with extravasated blood from the occiput to the fourth vertebra. The spinous prominence of the atlas lay to the right of that of the axis, and on a plane posterior to it, causing the axis to appear as though it had been pushed forward. In reality, however, its position in relation to the third vertebra was normal—the atlas being the dislocated bone. The left inferior articular process lay behind the articular process of the axis, while the right inferior articular process of the atlas lay anteriorly. This displacement was permitted by a fracture of the odontoid process of the axis. One fracture extended di-

rectly across its base, while the other had broken off a small portion of the anterior surface—the line of the fracture being almost at right angles to the first. The odontoid process, however, was still held in position by the transverse odontoid ligature, which was unruptured. As noticed during life, the atlas could not be rotated to the right, while it could be turned to the left. Strong extension made upon the atlas permitted it with difficulty to be brought into position.

Fracture of the Third, Fourth and Fifth Laminae; Death.—W. P., aged forty years, fell from a scaffolding, a distance of twenty feet, striking the top of his head on a curb, and alighting as nearly as possible with the axis of his body in a straight line. When seen half an hour later he was suffering from shock. His pulse was 80, and his respiration feeble. He was perfectly conscious, but indifferent to surroundings. There was a large, lacerated wound of the scalp four inches in length transversely across the forehead. In the region of the third and fourth vertebræ there was marked displacement forward of the third, with prominence backward of the fourth dorsal spine. There was total paralysis of both motion and sensation, and of all parts of the body below the portion supplied by the corresponding nerves. Neither urine nor feces had been passed since the accident. There was no priapism. Extension and counter-extension had no effect on the deformity.

The patient rallied for two hours, the pulse reaching 110, and the temperature 100° F. He complained a great deal of pain in the back of his neck and shoulders. Soon afterward the respiration became more hurried, the heart's action much more feeble, and, although perfectly conscious for one or two hours, he soon sank into a state of drowsiness, and died ten hours later.

At the autopsy there was found a fracture of the body of the fourth dorsal, with fracture of the laminae of the third, fourth, and fifth. The third was greatly displaced forward, carrying with it a fragment of the fourth. The cord was entirely torn across at the junction of the third with the fourth, and was pulped for half an inch, and compressed by the fragments of the other laminae.

Laminotomy would have relieved pressure, but would not have restored the crushed and torn cord.

THE MEDICAL TREATMENT OF APPENDICITIS, WITH A REPORT OF FIVE CASES ENDING IN RECOVERY.¹

By A. B. KIRKPATRICK, M.D.

THE diagnosis, symptomatology, and pathology of diseases in the region of the cæcum have been so recently and ably given by Drs. Price and Morton, members of the Society, that it would be useless for me to go over the ground again and attempt to add anything new on the subject. Surgery has made such marvelous advancement, and accomplished such brilliant results, in the last decade, that the medical treatment of certain diseases appears, at least for the time being, to be eclipsed. I am led to believe, from my limited experience, that some of our younger surgeons are too ready to perform abdominal section before they have exhausted the medical armamentarium, which, though perhaps somewhat slower, may be surer, and subject the patient to less risk.

¹ Read at the Philadelphia County Medical Society, December 9, 1891. For discussion, see page 551.

I think the surgeon, in consultation with the physician, will be able to determine and select the cases for operation, if they are so fortunate as to see them in their incipency; but in many of these cases the physician is called in late, and the surgeon later—too late in some cases.

We are all more or less infatuated with the wonderful results of present surgery, because, I think, it is something tangible. We make our diagnosis of appendicitis, open the abdomen, and remove the diseased organ. There is the ocular proof of our skill in diagnosis and operation. In medical treatment our evidence, if we can produce any, is not so conclusive. It is of a more circumstantial character.

No one of the same experience feels more deeply than I do the debt of gratitude we owe to aggressive surgeons, and no one, I think, takes the knife with more satisfaction; but I must always be *certain* that it is the *only* or safest method for the patient.

In the five cases that I wish to report, I demonstrated within twenty four hours—in four of them, at least—that an operation was not necessary, and all the five recovered without section. You may infer that they were all mild or benign. Three of them were, because seen early and treated vigorously.

Perhaps the title of my paper is not broad enough to cover it, but I wish to include in the medical treatment of typhlitis everything short of surgical operations, for I rely as much, or more, on mechanical measures as on internal medication. I wish to report what I consider as the most critical case first, though it was my third in regard to date. The first case dates from March, 1889.

In four of the cases other physicians had been in attendance, or saw the patient with me in consultation. Two of the cases came to my notice late in the disease, and, to make the history complete, I shall be obliged to read parts of several letters which were kindly written to me by the physicians who first had the cases in charge.

For the previous history of the first case I am indebted to the kindness of Dr. Edwin B. Wheeler, who wrote me the following letter two months after treating the case:

"Was called to see Master A., thirteen years old, Thursday, April 2, 1890. He had been constipated a day or two, evidence conflicting as to the condition of the bowels previous to that time. There had been no diarrhoea, however. I first thought it a case of typhoid fever, as the father had just recovered from that disease. I ordered a powder of calomel, but no action. Then gave one bottle of citrate of magnesia in half-bottle doses, with no result. The pain and tenderness in inguinal region increasing. Some tympanites. Gave injection of tepid, soapy water, with a few drops of turpentine, without any result. On Friday I gave drachm doses of Rochelle salts in one-third of a glass of water every hour for four doses, and tincture of hyoscyamus. There was no result, so far as any action of the bowels was concerned. The vomiting was increasing, and the tenderness covering a larger area. During this time it had become apparent that we had to deal with an obstructed bowel, due either to intussusception, typhlitis, or perityphlitis.

"Injections on Saturday morning were not retained. Passed up a catheter, but still injection was not retained. Gave morphine in small doses. Saturday P. M., Dr. J. H. Dripps saw the case with me. We agreed as to the case, but were both on the fence as to the advisability of section. We then called in Dr. Noble, of the Kensington Hospital, Saturday, 6

P. M. After talking over the case, we concluded that the boy's best chance was to have the belly opened and the obstruction removed. We ordered a room cleaned, and agreed to see the case the next day.

"At 9 A. M. Sunday, April 6, we (Drs. Dripps, Noble, and myself) met, and concluded that the boy's chance would be slight if we operated in such unsanitary quarters, with such nursing as the father and mother could give. The parents agreeing, we wrote to the Pennsylvania Hospital, asking them to take the case, the father to let me know the result of his errand. We separated with the understanding that if the hospital refused to admit him, we would operate, Dr. Noble saying he would hold himself in readiness until 2 P. M.

"About 11 A. M. the father informed me that the hospital authorities would send for the case as soon as I desired. I sent him back to the hospital with word to send for the case immediately. Somewhere about 3 P. M. the father informed me that he had been down town, but did not go to the hospital. He had stopped to see the boy's aunt, who said he should not go to the hospital. Whereupon I dismissed the case, refusing to have anything further to do with it. The case has certainly resulted very fortunately in your hands, and I am truly pleased, etc."

I will not go fully into the diagnosis of this case, for I was perfectly satisfied when I learned from the father, who had consulted in the case.

I was called in to the case at 10 P. M. Sunday, April 6. The symptoms all indicated complete obstruction of the bowel, and collapse. He had vomited first on Wednesday. The temperature was $96\frac{1}{2}^{\circ}$; pulse indistinct at wrist; heart was 140 per minute, and he was in a cold perspiration; respiration, 40. Abdomen exceedingly tympanitic, and bladder much distended. There was stercoraceous vomiting, and nothing had been kept on the stomach for days. I at once gave a hypodermic of morphine, atropine, and strychnine, and then emptied the bladder by a catheter, and about sixteen ounces of water passed. The patient was apparently moribund, but revived somewhat after the hypodermic injection; and though I feared he would die while giving it, I knew there was no time to lose, and thought there might be a slight chance for life if the obstruction could be removed, so I had him supported in the knee-chest position, and injected a pint of warm liquid containing castor-oil, turpentine, whisky, and Epsom salts. This was about 11 P. M.

This was kept in the bowel for half an hour by a compress, held in position by the hand; then he was allowed to lie down on the right side. Within an hour there was copious evacuation of liquid with scybalous masses. The injection was repeated at 12 o'clock, and another free movement resulted. These greatly relieved the tympany and pain. We then began to give turpentine and whisky by the mouth, once in two hours, and also a drachm of Epsom salts in hot water once in two hours alternately. Only the first dose of salts was rejected. The whisky and turpentine were retained. These were regularly administered through the night. I left the patient at 1 A. M. asleep, and he had become much more comfortable.

On returning in the morning, I found there had been several more movements, and the bladder had been emptied naturally. The tumor over the right iliac fossa had nearly disappeared, and the pain and tenderness were much less. The temperature was normal. The tongue and sordes on teeth indicated typhoid fever. There were five movements of the

bowels within twenty-four hours after the enema, and not less than three to six any day after for two weeks. The temperature gradually rose to 102° , and the evening temperature was about that for a week, when it gradually declined, but did not become normal till the 29th, or three weeks from the time I first saw the case. The stools had quite the appearance of typhoid, as did the tongue, and there was a suspicious eruption on the chest and abdomen. After the obstruction was removed the case was treated as a simple case of typhoid fever. He had 2 grains of quinine and $\frac{1}{30}$ of a grain of strychnine three times a day, with nitro-muriatic acid, pepsin, and bismuth every four hours, and paregoric when needed to control the bowels, and a liquid diet throughout.

At noon, the fourteenth day after I first saw him, after some pain and flatus, he passed a slough from the bowel, which, in the recent state, was elliptical and two and a half inches the long diameter. There seemed to be some pain and tendency to collapse, so he got another hypodermic and free stimulation. There was also a rise of 2° in temperature. He rallied the next day, and made a rapid and complete recovery.

On May 6, which was just a month from the time I first saw him, he sat up and took solid food.

He is a strong, healthy boy, and now drives for me.

I watched the case very closely throughout, and feel certain that the intussusception, or typhlitis, or perityphlitis, was followed by a clear case of typhoid fever. I am by no means so clear in regard to the pathological condition in the region of the cæcum, and shall greatly appreciate the views of the members of the Society on that point.

The second case, Mr. M. K., who is a prominent and very active literary man in this city, dates from March 24, 1889.

The patient gave me a very intelligent history of his case, which was that there had been a gradual decrease in the evacuations for several weeks, with a great deal of distention and discomfort of abdomen, and finally obstinate constipation followed. When I first saw him there had been no movement for several days.

He had a tumor and localized pain in the right iliac fossa. Temperature $103\frac{1}{2}^{\circ}$. Pulse 120. Coated tongue, etc.

He was given a hypodermic of morphine and atropine for the pain, which gradually spread over the abdomen as the gas accumulated. Two large doses of castor oil and turpentine were taken without any action. He took calomel, soda, and ipecac powders for twelve hours, followed by Hunyadi water, but still there was no movement of the bowels. We then resorted to the enemata of turpentine, laudanum, castor oil, Epsom salts, and hot water, given in the knee-chest position. These moved the bowels freely and relieved the pain and distention. Turpentine stupes were also used freely.

There was a double inguinal hernia in this case, and to satisfy ourselves that there was no strangulation of the gut Dr. W. W. Keen was called in consultation, and pronounced the case free from any such complication, and confirmed the diagnosis of appendicitis. He suggested pills of colocynth comp. and opium.

The patient made a good recovery, and for several weeks took pills of aloin, strychnine, belladonna, cascara, and physostigma to relieve the atonic condition of the bowel, and an occasional dose of Hunyadi, as he was rather stout and full-blooded.

In July, or four months later, this same patient had a recurrence of the trouble while at the seashore,

which began, possibly, with a slight tendency to constipation early, but the first the patient complained of was a severe serous diarrhoea with high temperature— 104° . Pulse 128 (normal 58). Severe pain in the ileo-cæcal region. This attack began before I took up my summer practice at Cape May Point, and F. E. Stewart, of Wilmington, was called in.

He made the diagnosis of colliquative diarrhoea, and gave acetate of copper and morphine to check it, and aconite for the fever, but nothing seemed to have any permanent control over the bowels.

Right here in this case, which was my first patient, but his second attack of appendicitis, I learned a very valuable lesson. Here was an obstructed bowel, and nature was trying, by pouring out a very excessive liquid secretion, to flush out the obstruction or foreign matter.

I simply took the cue from nature, and with small, frequently repeated doses of calomel, ipecac, and soda, followed by salines, accomplished the object, and in less than six hours had the satisfaction of seeing the tumor, which had been in the region of the cæcum, deposited in a commode, which the black, very offensive mass nearly filled. In this attack we used hypodermic injections of morphine for pain, and pilocarpine for the high fever and dry skin and tendency to cerebral congestion, as the kidneys were not acting at all freely. There was no vomiting after the first hypodermic, and the patient began at once to take iced champagne and Apollinaris, and soon was able to take milk and other liquid food.

In this case no resort was had to rectal enemata, as the bowels were thoroughly cleared out within six hours after the time I first saw the patient, and in three or four days he was attending to his regular business. He took the aperient, tonic pills for several months, and was requested to use Hunyadi water freely, and rectal injections, if the symptoms occurred again. He has had no recurrent attacks and no constipation since.

The fourth case, Miss S., occurred at Cape May Point, and was first seen and treated by Dr. F. E. Stewart, Wednesday, August 25, 1891. I wished to speak of this case at the special meeting, September 28, when Dr. Morton read his interesting paper on "The Surgical Treatment of Appendicitis," and wired Dr. Stewart for his diagnosis, and he sent me the following telegram: "Case was obscure. Called Dr. David Stewart in consultation. He said 'appendicitis.'" I am indebted to Dr. F. E. Stewart for kindly furnishing me the history of this case, which I quote from his letter:

"In the case of Miss S., there were pain and tenderness over the abdomen, which, as the case developed, became marked in or over the right iliac fossa. Instead of dorsal decubitus, the patient sat in a chair with her thighs flexed on the abdomen, and could not lie down until relieved by treatment. There was fever; temperature 102° . There was constipation, nausea, and, if I remember correctly, some vomiting, but the latter was not a marked symptom of the case. I did not discover a tumor on abdominal palpation or vaginal touch; but Dr. David Stewart, who saw the case with me on the second day, called my attention to what appeared to be a doughy mass on the right side of the body on examination *per rectum*. I must confess that I would not have discovered said mass except my attention had been called particularly to it; or, in other words, I might have had a suspicion of its existence, but it required a finger of more education than mine in feeling for tumors of this nature to make a positive diagnosis.

"The treatment suggested consisted of hot turpentine stupes, opium, and iodide of mercury; under this she seemed to improve.

"From the beginning I recognized the gravity of the case. I advised her to go to the city at once, as proper nursing was out of the question, situated as she was at the Point. Furthermore, I told her if she got worse an operation might become necessary, and then it would be too late to remove her."

I first saw the case Monday, August 31, at 6.30 P.M., and found her extremely weak and nervous from the trip from Cape May Point. The temperature was $103\frac{1}{2}^{\circ}$; pulse 120; abdomen tense, tympanitic, and extremely sensitive. I found a large tumor in the region of ileo-cæcal valve, intense pain and nausea. There was extreme tenderness over the tumor and the abdomen generally, indicating a good deal of general peritonitis.

Miss S. was brought to the city by her sister-in-law, and they went into a house where the furniture had just been piled in. There was not even a bed up, or any convenience for heating water, so, in regard to nursing and environment, she did not improve her condition. When I arrived she was on a bed that had been hastily put up.

The sister-in-law, who acted as nurse, got hot water for stupes and enemas, and the patient had the same treatment, practically, as the boy—the first case reported—except that I entrusted the giving of enemas to the nurse, who proved very intelligent and efficient.

When I called the next morning I found the bowels had moved freely several times, and, though the patient had had a restless night, she had slept some. The pain and distention were nearly gone, and the temperature had fallen to 101° . By Wednesday, September 2, the temperature was normal, and the pain was entirely gone. She began sitting up Thursday, without my knowledge, and the next Wednesday she went back to the Point. I believe she had a slight recurrence of the pain, inflammation, and constipation the week after she got home, but they were controlled by injections, stupes, and opium suppositories.

She has enjoyed good health since.

The other two cases of typhlitis, which occurred in my practice within the last year, were quite similar in regard to symptoms and treatment to the others that I have reported in detail, and as I relied only on myself for the diagnosis and treatment, I will not weary you with a repetition of them. I have not aimed to give the latest and most approved treatment from the text-books of the day, but what seemed to me to be indicated and necessary in the emergencies of these cases, when I dared not waste a moment in temporizing or experimenting. It appears to me a serious loss of time to depend solely on external applications to the abdomen, and protiodide of mercury, with belladonna and opium, internally, when we have to deal with a bowel obstructed by hardened accumulation of feces. I believe most cases of obstruction of the bowel, if not due to intussusception or strangulated hernia, are due to the absence of the natural secretion caused by the localized typhlitis, which, if not relieved, becomes a perityphlitis, and then more or less general peritonitis must result. The rational method seems to me to be:

1. To relieve the pain by hypodermic injections.
2. To remove the cause or obstruction by causing, if necessary, pathological or excessive secretion, by giving some saline, which I believe is the best anti-phlogistic for the inflamed bowel.

3. To soften the hardened fecal accumulation from below with enemata, solution of Epsom salts in water as hot as can be comfortably borne, to which I add turpentine and oil.

The knee-chest position, with copious enema, favors the distention of the colon up to the seat of the disease.

I have found by experience that the enema to be effective must be given in this position, and that it must remain in the bowel for some time, and in several of my cases it was necessary to repeat the operation three or four times. This plan of treatment has been successful in six cases, which are all that I have treated; but I fully realize that it may fail in the seventh.

I think it is truly in meetings like this that surgeons are broadened medically and physicians surgically—if I may be allowed the phrase. Doctors are only human, as we hear it said of ministers, and as such they are prone to do what they prefer, whether it be surgical or medical, and naturally they do best what they like to do and do oftenest.

SUPRA-VAGINAL HYSTERECTOMY.¹

By J. M. BALDY, M.D.,

Professor of Gynecology in the Philadelphia Polyclinic; Surgeon to Gynecean Hospital; Gynecologist to St. Agnes's Hospital.

IT is not the object of this paper to discuss the different methods of surgical treatment for uterine tumors, nor to more than incidentally touch upon their medicinal treatment. My personal practical experience in the surgical direction has been wholly that of supra-vaginal amputation, excepting in those cases of small uterine fibroids where it has been found advisable to remove the appendages only. In this connection I may say that where the opportunity presents to choose between the removal of the appendages and the enlarged uterus itself, I always favor the removal of the diseased uterus, along with the tubes and ovaries. The one, and only, point which comes into consideration in this decision is whether or not the uterus is large enough to be delivered through the abdominal incision. If it can be delivered, the hysterectomy is always performed. To my mind, one of the great advantages gained in hysterectomy, by the extra-peritoneal method, over oöphorectomy, is that no stump or raw surface is left in the peritoneal cavity, to become the seat of suppuration, or to whose freshened surface loops of intestine can become adherent. In uncomplicated cases, the operation amounts to little more than an exploratory incision, and, in my opinion, is as safe as an ovariectomy.

I have operated fifteen times for large uterine tumors. In fourteen cases the uterus was removed, but in the remaining case the operation was ended as an exploration. Of the fourteen finished operations, two died.

The patient whose tumor was not removed was a white woman, about thirty-five years of age. The growth had existed for more than ten years. When she was first seen she was in bed, where she had been, for some weeks, with an attack of abdominal pain. For months she had only been able to be about at odd times, and considered her life a burden. An operation had been proposed to her a long time before, and its dangers brought vividly before her eyes. She had continued to suffer from pain and hemorrhage, until, in spite of her former fears, she was, at the time I saw her, determined to have the operation per-

¹ Read at the Philadelphia County Medical Society, December 9, 1891. For discussion, see page 551.

formed at all hazards. In spite of her long suffering, she was still a strong, hearty-looking woman. The abdomen was opened at the Gynceean Hospital, before a number of physicians, and the tumor found to extend above the pelvic brim. The intestines were adherent over it at various points, and had to be torn loose in order that a careful exploration could be made. The growth was found to be in the broad ligament, and was consequently immovable. The only adhesions which existed were the intestinal ones, which had been torn through. The removal of the tumor meant a complete enucleation of a solid growth, with all the chances of death from hemorrhage which such procedure entails. It was decided wise to end the operation, explain the condition to the woman, and let her decide whether or not she desired to risk its removal at some subsequent time, or preferred a trial at electro-puncture. The result was a complete symptomatic cure. It is now some five or six months since the operation, and the woman declares she has never been so well in her life. She attends to all her duties, goes to dances, and in all other ways leads an active life. She declares that the tumor is rapidly decreasing in size, and is most confident that it will disappear altogether. She looked at me most skeptically when I told her it would not go away, and that some day all her old symptoms would come back.

The last time I saw her—a month ago—I was considerably staggered by the fact that there was an undoubted decrease in the size of the enlargement. It is barely possible that it may eventually turn out to be another example of a solid tumor becoming absorbed after an exploration; several such cases have been reported by Tait and others.

One of the points of greatest interest to me in this case is the fact that her relief is not dissimilar to what is claimed for the electrical treatment. Had she gone to Dr. Massey for that treatment, as I advised her to do, and which she would have done had she not gotten well so rapidly, electricity would have obtained the credit for the cure. As it is, the lesson taught should not be lost. Is it not possible that the great relief apparently obtained by the electrical treatment is at times a mere coincidence? Or would not any profound impression bring about a similar result in at least some of these cases?

The two cases which died were both very bad subjects for operation, and their deaths can in no way be used as an argument against the operation. The true deduction to be drawn from the result in these two cases is that the operation should not be left as a last resort, as is advocated by Keith and the electricians, but that it should be undertaken early, and while the tumor and patient are both in a good condition of health. It is the same old battle which had to be waged so long and so vigorously in the case of ovarian cysts, and the end will be just as surely the same—that is, removal before the woman's health is broken down, and before the tumor becomes unhealthy and adherent.

The first death occurred in a colored woman, about thirty-five years of age. The tumor was extremely irregular, and extended up to the ensiform cartilage. The patient was in the last stages of emaciation, and could only walk with the greatest difficulty. It was a serious question in the minds of some of my colleagues, who examined her, whether the disease was not splenic or a malignant omentum. I was rather inclined to the latter opinion myself, and went to the operating-table prepared to meet any condition or complication whatever. The woman, her husband, and

her doctor were all told that her chances for recovery without the operation were *nil*; with the operation that they were little better, although there was some and the only chance. They all agreed upon having the operation, and it was performed at the Polyclinic Hospital in the presence of my class. The omentum was adherent over the upper part of the tumor, which proved to be a nodular uterine fibroid. The omental vessels, which were as large as the radial, were tied and cut away, and the tumor delivered. The appendages were diseased, and on one side the tube was distended with caseous matter. A good pedicle was secured, and the woman was in her bed within the hour. For five and a half days there was but a single bad symptom—a pulse between forty and fifty beats to the minute. The bowels were opening daily of their own accord; the temperature was normal; the appetite was good, and solid food was being taken with a relish. The abdomen was flat, and there was a minimum amount of pain. She was so well that her doctor was notified that she was safe. At the end of the fifth day she began to develop bad symptoms; the abdomen gradually distended, the pulse became rapid and hard; the temperature slightly elevated; the bowels obstinately constipated; food was refused; and, finally, vomiting set in, and she died at the end of three and a half days from septic peritonitis.

How it was contracted is still a mystery to me, as there was no drainage-tube used, and the dressings had not been touched since the day of the operation. The stump was perfectly dry and sweet.

The second case was that of a white woman, thirty-two years old. Three years ago she had consulted me, and refused operation, preferring electrical treatment. Off and on during this period she was under the care of Dr. Massey, and toward the end he resorted to electro-puncture through the vaginal vault. She stood this treatment fairly well for a few times; but finally suppuration occurred, and a sinus track opened on the outside of the left labia. Pus discharged freely from both the vagina and the outside sinus. When Dr. Massey asked me to see her, with the view to an operation, she was bed-fast and could barely move; she was profoundly septic, and too tender to handle. A finger in the vagina disclosed a fluctuating nodule, apparently of the fibroid, in the posterior cul-de-sac. This, taken in conjunction with the discharge of pus, made a pretty clear diagnosis of suppurating fibroid tumor following electro-puncture. I gave as my opinion that the only chance the woman had for her life was to get rid of the suppurating mass. Everybody concerned was willing and anxious that she should be given the chance, so I admitted her to my wards at St. Agnes's Hospital, and performed the operation. The intestines and omentum were found adherent to the top of the tumor; the tumor was adherent in every direction to the pelvic walls; both ovaries were found posterior to the uterus, and both formed cysts as large as a goose-egg and an orange respectively; the tubes were both diseased. The appendages were closely adherent, and only freed with difficulty. It was found that the fibroid was not suppurating; but that one of the ovarian cysts was. The puncture-needle in one or more of the treatments had entered this cyst, which was almost directly in the median line, and was the "fluctuating nodule" which was detected at the first examination. The external sinus opened into this cyst, and when the tumor was removed it left the open mouth of the sinus behind, at the same time deluging the whole pelvis with the

dark, virulent cyst contents. A clean removal of the uterus and both appendages was secured; the pelvis was flushed out most carefully and thoroughly, and a drainage-tube was placed at the opening of the sinus track. In spite of all precautions, the whole pelvis suppurated, and the woman died of septicæmia on the fifth or sixth day.

Certain it is that neither of these deaths ought to weigh against the operation of hysterectomy in cases where the conditions are fairly favorable. If cases are ever to be considered last-resort ones, these come in that class, and had I been operating for statistics rather than for the good of the women, nothing would have induced me to touch either one of them.

As I have said twelve cases recovered, and went home well women. With one or two exceptions, they were all complicated cases—short, thick pedicles, or pedicles which had to be manufactured; diseased tubes and ovaries; adhesions. One case had a nodule as large as the fist protruding into the vagina from the cervix. This mass had been sloughing for weeks, and the woman was deeply septic. The operation, which was performed at the Gynæcean Hospital, was done in two stages. With knife and scissors the sloughing tumor was removed from the vagina. The instruments were quickly changed, and a supra-vaginal amputation finished the operation. So septic was the woman, that when the stitches were removed on the eighth day the whole line of the incision gave way and the intestines protruded in a mass. They remained out for about two hours before I could be found to replace them. Fortunately, my assistant, Dr. A. C. Wood, reached the hospital earlier than myself, went immediately to work, and was just replacing the protruding mass as I walked into the operating-room. In spite of this accident she made a good recovery, and is to-day well and at her usual occupation. Two of the twelve patients who recovered from the operation are dead. The other ten, as far as I know, are alive and in better health than they have been for years. The two deaths were due, in one case, to a subsequent operation for an ovarian cyst; in the other, presumably to heart disease. About six weeks or two months after her return home, while in apparent perfect health, she was suddenly seized with syncope, and was dead within half an hour.

A PLAN OF TREATING TUBERCULAR DISEASES.

By NEVIN B. SHADE, M.D., PH.D.,
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IN the treatment of this most fatal of infectious diseases, I have secured gratifying results from a very plain and feasible plan of treatment; outlined as follows:

1. Remove the cause, that is, break up the soil in which the germs develop. In doing this the predisposition or susceptibility, whether inherited or acquired, is greatly modified, and in some cases wholly annihilated.

2. Restore the powers of assimilating food, and thereby increase the volume and improve the quality of blood.

3. Repair damaged lung and throat tissue.

The success of the two latter depend entirely on the former. If the source of supply from which the bacilli derive their nourishment is not broken up there is but little that can be done in the way of increasing the volume of blood or repairing damaged lung tissue. When the cause that produced the damages is still allowed to continue, why undertake

to repair damages, or add to the flame by advising nutritious food, cod-liver oil, and stimulants, producing more fuel to be burned up in the alimentary canal and tissues of the physical system?

I do not take charge of a case unless they agree to flush the colon with hot water every other day, the larger the quantity the better. This keeps the reservoir of the feculent matter empty and allows the small intestines to relieve their engorgement, and more or less obviates the fermentation of chyme in the duodenum, from whence the chyloferous vessels receive the nutritious part of the food. When, however, this section is in a crowded condition, as it is most generally in invalids (especially who lead sedentary lives), the chyloferous vessels are unable to discriminate between chyle and excrementitious matter, and the result is that the lungs are called upon to filter the unwholesome mixture received from the right side of the heart, and as a result is furnished the fertile soil in which the germs of tuberculosis develop. This will very readily account for the laryngitis, bronchitis, and also the sore throat, which in the last stages furnish enough "bacilli soil" to develop the germs in those parts also.

In addition to flushing the colon, I also prescribe sufficient hydrargyrum chloridum mite to clean the tongue and remove the clammy taste, as well as dryness of the throat. After this, hypodermics of hydrargyrum bichloridi, watching its physiological effect, not to approach too closely ptialism. The mineral treatment must be given with great caution and not continued more than one week at a time. I also prescribe a granule or two of (dosimetric) quassine before meals with hot water. So much for disorganizing the bacilli and breaking up the soil in which the germs develop. I have proven this theory by a careful examination of the bacilli under the microscope when treatment began, and in a few weeks invariably found the bacilli fading and becoming disorganized, and scarcely recognizable.

If, however, the patient's volume of blood has become so small, from mal-assimilation of food, causing rapid contraction of the heart to sustain life, all hope has fled and death is inevitable.

It will be noticed that carrying out the suggestions of my first proposition naturally prepares the way to restore the digestion and "increase the volume and improve the quality of blood." In addition to the quassine I prescribe the syr. hypophosphite of soda in dry cough, and syr. hypophosphite of lime in copious expectoration, and never give the syr. hypophosphite of lime and soda.

Now we come to the third outline of treatment. Will medications benefit the lung tissue when taken into the stomach? My experience has been negative. I have been using with the most remarkable results inhalations of ammonium chloride and also of tar by means of a modified inhaler. This direct treatment has given the best results in rapid breaking down of lung tissue, cavities, hemoptysis, bronchitis, laryngitis, and also in the worst cases of post-nasal and laryngeal catarrh it never fails when the aponeurosis has not been destroyed. I have not exaggerated the results achieved by the ammonium chloride in my experience.

Out of 113 cases of tubercular consumption up to last September, four cases have died, 14 I have lost sight of, 11 still continue treatment, and the rest are pursuing their accustomed avocations. I should like to cite a few cases of remarkable interest, but time and space will not permit, but may, possibly, in the near future.

I should be pleased to hear from any of my brethren in the profession who have used the hydrargyrum chloridum mite in tuberculosis.

The chlorides of gold and zinc have a good effect in some cases, but do not compare with the mercurial treatment, which I find an implement of precision as an alterative and disorganizer of the tuberculosis bacillus.

1009 H STREET, NORTHWEST.

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 9, 1891.

The President, JOHN B. ROBERTS, M.D., in the Chair.

THE MEDICAL TREATMENT OF APPENDICITIS, WITH A REPORT OF FIVE CASES ENDING IN RECOVERY.¹

WAS the title of a paper by DR. A. B. KIRKPATRICK.

DISCUSSION.

DR. CHARLES P. NOBLE: I arrived a little late, but I understand that reference has been made to a case which I saw in consultation. It was undoubtedly a case of intussusception. The case illustrates the fact that occasionally a patient will recover from this condition by sloughing of the bowel. It also illustrates the difficulties of diagnosis of the cause of peritonitis when the surgeon is called in late. The boy had been sick for nearly a week when I saw him. There was evident obstruction of the bowels, with fecal vomiting, and there was undoubtedly well-marked peritonitis; and the history indicated that the peritonitis had arisen in the right iliac region. The question was whether the case was one of appendicitis or one of intussusception. The physicians in charge were inclined to regard it as a case of appendicitis, and I agreed with them, as the symptoms of invagination were absent; yet I must say that I felt that intussusception through the anus, but it was so high that my finger barely touched it, and I was not sure that it was not a fold in the bowel.

It is fortunate for that boy that our advice was not followed, for if he had gone to the hospital and been operated on in the condition that he was in, the chances would have been much in favor of a fatal result. At the same time, I think that it would be exceedingly dangerous to argue from such an exceptional case any general rule of practice. The recoveries in this class of cases, where the bowel is allowed to slough away, I think does not exceed two or three per cent.

DR. T. S. K. MORTON: The first case reported is of interest from the fact that it was a well-marked case of intussusception, and yet the classical symptoms of this condition were absent. There was no passage of blood with the stools, and there was absence of rectal irritation. The condition was about as marked as it possibly could be, and yet a diagnosis apparently was not possible.

I think that the position of the surgeon in regard to appendicitis is often misunderstood, especially by the mere medical practitioner. So far as I have seen, the surgeon is not anxious to operate, and the cases not operated on vastly exceed those in which operation is done.

With reference to the constipation of appendicitis, I think that where the bowel cannot be moved by any procedure either from above or below, the case is exceedingly unfavorable for recovery, with or without operation; whereas, if the bowels can be moved, the prognosis becomes much more favorable. If, after the bowels are freely moved, the symptoms subside, I look upon the case as one that will probably not require operation at that time. If, however, there is only temporary amelioration of the symptoms, or none at all, the case is one for operation.

DR. WILLIAM S. STEWART: I am not satisfied that the cases reported should be regarded as true cases of appendicitis. There was evidently impaction of the ascending colon in all five cases, due no doubt to inflammatory action; but it is evident that in these cases operation was not justifiable. First remove the impaction, and then if there is an aggravation of the symptoms, the inflammation becoming more marked, it is then time to consider the propriety of surgical treatment.

DR. KIRKPATRICK: I am sorry that no one has attempted to throw light upon the subsequent course of the first case reported as to whether the typhoid condition which followed was due to the inflammatory trouble or was a true typhoid fever.

I should not like to be considered, in this paper, as not favoring operation in proper cases. The point which I wish to make is, that I fear that in some cases the physician does not take the proper means to open the bowels before resorting to operation. I fully agree with what has been said as to the unfavorable prognosis of operation in cases where the bowels cannot be moved at all.

I think the criticism of (I believe) Dr. William S. Stewart hardly just or tenable. I understood him to say that he did not believe the cases reported were true cases of appendicitis—only obstruction of the bowel. I took particular care not to report in detail the cases in which I relied upon myself for diagnosis, but based my treatment upon the diagnoses of Drs. Keen, Noble, Wheeler, Dripps, and David Stewart.

I think we must admit that they are careful, skillful men, and capable of making a correct diagnosis.

SUPRA-VAGINAL HYSTERECTOMY.¹

Was the subject of a paper by J. M. BALDY, M.D.

DISCUSSION.

DR. G. BETTON MASSEY: Dr. Baldy is to be commended for going into the subsequent history of his cases—a thing that is not often done. I must, however, take issue with him in regard to the case which I referred to him. I feel perfectly confident that in each puncture the needle went into solid tissue, and not into a cyst. The position of the nodule was that of a retroflexed uterus, a mass clearly presenting in the posterior vaginal vault. Another reason against the view of Dr. Baldy is that at no time was there any reaction from the puncture. An abscess formed, opening on the inner side of the thigh, but I certainly saw no septic condition. The temperature was not above 99.5°, and my idea of sepsis is connected with a higher temperature than that. This was her condition up to the time of operation, and in fact the woman felt so well that I had great difficulty in prevailing on her to have the operation performed. I think that, possibly, if the operation had been limited to a vaginal procedure, with the object of evacuating the pus, the result might have been different.

¹ See page 545.

¹ See page 548.

I think that Dr. Baldy should also have mentioned that three years ago, when the woman came under his observation, she was exceedingly tender on both sides in the region of these diseased appendages. This makes me think that the diseased appendages had been present for a long time, acting as a hindrance to the electrical work. After their condition was revealed by section the better plan would have been to remove the appendages and allow the healthy fibroid to remain.

I also want to take exception to the suggestion that the results of electricity are simply coincidences. Coincidences are very fortunate adjuvants in most of our work, but they are a mighty poor thing to depend on. I do not think that the electrical workers throughout the world who have treated these tumors, could have gotten their results simply through coincidences.

It might also be said that the result obtained in a case which I saw yesterday was a coincidence. This was a dispensary patient that had been treated by abdominal electro-puncture as well as by vaginal electro-puncture and intra-uterine applications. Up to the time of the use of abdominal puncture, in which three needles were simultaneously employed, the progress was slow. She was quite lame from pressure on the crural nerve, and possibly from diseased appendages. In this case operation was recently urged by Dr. Baldy. As the result of these punctures, and the use of a current of 100 to 200 milliamperes, she is now so comfortable that she has not time to come to the dispensary for further treatment, the tumor being very materially reduced in size. After being an object of charity for years, she is now earning a living at general housework within a half square of this hall.

DR. CHARLES P. NOBLE: My own experience with abdominal hysterectomy has not been very large, for the reason that most of the fibroids that I have seen have not especially troubled their possessors. The majority required only medical treatment. Probably not more than ten per cent. were especially troublesome, and many of the women did not know that they had any tumor. On the other hand, as we all know, fibroids can give rise to dangerous symptoms either from hemorrhage or pressure.

In my work I have taken a view opposite to that of Dr. Baldy, particularly when the fibroid is from medium to small. If the symptoms demanded operation, I have felt that I was doing the patient the best service by removing the appendages and not disturbing the tumor. None of these cases have died, and the results have been all that could be desired. An objection to hysterectomy by the extra-peritoneal method is, that a weak spot is left in the abdominal wall which is liable to become the seat of hernia. This is one reason why I prefer removal of the appendages where it can be done. Where the appendages are diseased, particularly if pus is present and discharged into the pelvic cavity, this would influence me to remove the fibroid, particularly if it just about filled the pelvis. If this were not done, I should anticipate death from sepsis. It is practically impossible to wash out the pelvis if the tumor about fills it, and with the tumor present it is impossible to secure drainage.

I quite agree with those who urge early operations when the tumors are giving rise to trouble. I have witnessed some fifteen hysterectomies, although I have done but two myself. All of these cases have recovered. Where the operation is not complicated

by adhesions, and where the patient is not broken down, I quite agree that the risk of the operation should not be greater than that of ovariectomy.

DR. B. F. BAER: I congratulate Dr. Baldy upon his success, and I believe that in the main I agree with him as to his advice in regard to operation. Where the appendages can be thoroughly removed, and the tumor is small, I should prefer to remove them, but in some cases they are so spread out that thorough removal is not possible. In such cases I prefer hysterectomy. The result in early hysterectomy is very good, almost as good as in ovariectomy, and I have become an advocate of early hysterectomy in the cases requiring operation. In my experience, fibroid tumors, as a rule, do give rise to trouble. The fact that the patient submits to an examination and will submit to treatment by electricity, by puncture, and other methods of treatment more or less painful, and even to hysterectomy, shows that the disease does give rise to trouble. I cannot understand why it is that men of large experience say that fibroids are not attended with symptoms. It is seldom that fibroids actually kill, but often the patient would prefer death to a continuance of the suffering. When, therefore, the tumor is giving rise to symptoms, and is of such a nature that its removal is not very dangerous to life, and the appendages are not readily *entirely* removable, I prefer hysterectomy.

Dr. Baldy did not discuss methods, and therefore I shall not take up that subject, except to say that I believe the pedicle should be treated intra-peritoneally whenever practicable—*i. e.*, when it is small. This certainly simplifies the operation, renders the after-treatment easier, and makes the condition of the patient after recovery more satisfactory. The patient recovers as well, if not better, when the pedicle is dropped. In the case that died at the Polyclinic Hospital, I have thought the result might have been different had the pedicle been dropped. My impression is that the woman died of tympanites more than anything else, and, as is well known, the extra-peritoneal method of treating the pedicle is very apt to be followed by tympanites and obstruction of the bowel from traction on the rectum.

In regard to Dr. Massey's case, I can scarcely agree that the appendages could have been removed and the uterus left. One of the tubes was quite diseased and spread over the tumor. If any operation was indicated, hysterectomy was the one, and the only portion of the technique that I would dissent from is the manner in which the pedicle was treated.

DR. BALDY: In regard to the treatment of the pedicle I shall only say that I prefer to treat it outside, and my experience has been such that I shall always employ the extra-peritoneal method. The advantages, both theoretical and practical, are in favor of this plan.

In regard to Dr. Massey's case, I can only theorize as to the point of the puncture. I think myself, that the majority of the punctures extend in the fibroid, but I know that some of them had been in the cyst, thus infecting it. The cyst was densely adherent at the point of puncture. I do not think that a fibroid will always show where a puncture has been made.

I have not seen much tympanitis after hysterectomy. Those cases that get well do not have distention. Where there is septic peritonitis, there is always obstruction. In both of the fatal cases that I have reported there was well-marked septic peritonitis. Neither can I agree in regard to the liability to hernia after this operation. I have seen only one hernia after hysterectomy, and that oc-

curred at the seat of the drainage-tube an inch above the pedicle. Although I see many cases after abdominal section coming back complaining, I have not seen one case of hysterectomy with post-operative trouble.

Many operators prefer oöphorectomy, and always do it where it can be done. I prefer hysterectomy, and give it the preference. In some cases you cannot remove the ovaries, and in others you may not be able to find the ovaries. In the case of exploratory operation reported, I found one tube which was distended with a bloody fluid, but I could not find the corresponding ovary or the ovary and tube of the opposite side.

Sometimes fibroids do not give rise to symptoms. One case operated on had very few symptoms. The girl had been told that she had a tumor, and came determined to have an operation, feeling that she would die if the tumor were not removed. The tumor was large. There was little hemorrhage or pain, but there was one point which would, in the opinion of many, justify operation, and that was that the patient was only twenty-five years of age, and the tumor was growing rapidly. The vast majority of fibroids I have seen, have been advised to have nothing done. In future, with my present experience, I would consider such advice, in many of these cases, as unjustifiable.

FRACTURES AND INJURIES OF THE SPINE IN THE CERVICAL REGION.¹

Was the title of a paper by DE FORREST WILLARD, M.D.

DISCUSSION.

DR. JAMES HENDRIE LLOYD: I am sure that Dr. Willard will recall the case of a little Italian girl at the Home for Crippled Children. She was a case possibly of dislocation of the odontoid process. The exact nature of the trouble was never ascertained, as the child recovered. She fell from bed and was picked up with the injury to the neck. She was admitted to the Philadelphia Hospital, under my care, some weeks after the accident. At that time she was markedly paralyzed, and the muscles of the arms had undergone a certain amount of degeneration, indicating an injury of the cervical portion of the cord. Under prolonged rest in bed, followed by a plaster jacket and jury-mast extension, the child made an excellent recovery, although there was still some deformity in the region of the spinous process of the third cervical vertebra, and slight projection in the pharynx. She spent more than a year in the Home for Crippled Children after her discharge from the hospital, so that I had an excellent opportunity to watch her subsequent history. There was no relapse or return of paralysis after a year on her feet.

CLINICAL SOCIETY OF MARYLAND.

Baltimore, December 4th, 1891.

THE 258th regular meeting was called to order by the President, Dr. Robert Johnson.

DR. THOMAS OPIE read a paper on

THIRTY TWO UNSELECTED ABDOMINAL SECTIONS.

These cases were operated upon by Dr. Opie at the Baltimore City Hospital, in the twelve months ending October 31st, 1891. The conditions for which the operations were performed were as follows: Ovarian

tumors, 6; chronic ovaritis, 7; fibroid tumors, 4; pyo-salpinx, 5; retroflexions, with adhesions and dysmenorrhœa, 3; exploratory incisions, 3; extra uterine pregnancy, 1; cyst of broad ligament, 1; cystic degeneration of ovary, 1.

The number of deaths was four—as follows: oöphorectomy for double pyo-salpinx, 1; shock from ovariectomy, 1; oöphorectomy for acutemania, 1; abdominal hysterectomy for fibro-cystic tumor, 1.

Stitch abscesses occurred nine times, most frequently in cases where the drain-tube had been used. Early opening of the abdominal dressings favor their occurrence. When the dressing remained intact for seven days, there seemed to be the greatest immunity from the stitch abscess. Dr. Welch says that the staphylococcus epidermis albus is the most common cause of stitch abscesses in wounds treated a septicallly and antiseptically.

Drainage was used in but three cases. In one case it retarded convalescence, in another it seemingly did no good, and a small superficial abscess at the entrance of the tube, followed its withdrawal. In the third case, an abscess also occurred at the site of entrance. A plentiful supply of fine, properly-prepared elephant-ear sponges will do away with the necessity for flushings in most cases and remove the need for drainage. They are efficient helps in keeping the abdomen free from infection. They can be utilized in keeping back the intestines, in occupying the cul-de-sac in positions below the pedicle, in taking up blood or secretions, in staunching hemorrhages, in separating adhesions, in protecting the intestines while closing the abdomen.

Drainage is doing more harm than good and ought to be abandoned by the abdominal surgeon. The oft-repeated removal of dressings of the patulous drainage tube, must, of necessity, be a very great danger; surely it favors decomposition and invites germs. After an anæsthetic, restlessness and jactitations are not wholly restrainable, and it is easy to see how physical injury may accrue to the patient during this time from these smooth, but not at all innocent, glass tubes. When the laboratory physician says that bruised tissue is a paragon field for the cultivation of germs, let us heed the warning and cast aside the drainage tube.

Dr. Parkes says, as to drainage tubes: "Views and practices concerning drainage have materially changed ever since the antiseptic era began. Our predecessors drained to permit the escape of pus, which they knew would form. Until lately, we have drained in order to prevent its formation. We seem now to be on the eve of an era when we need to drain but little or not at all. We resort to drainage now only of necessity in septic or infected cases. In other cases, we drain mostly from habit or from fear. Indeed, when we start afresh, as it were, without previous infection, the practice of drainage is a confession of fear or of weakness, both of which are alike unscientific and unfortunate. It even seems to me that in many cases where all other septic requirements have been met, we do much more harm than good by the use of drains."

DR. W. S. THAYER spoke of

THE TREATMENT OF FIVE CASES OF MALARIAL FEVER AT THE JOHNS HOPKINS HOSPITAL, WITH METHYLENE BLUE.

Immediately after the appearance of the article in the *Berliner Klinische Wochenschrift*, for September, 1891, in which Gulmann and Ehrlich described the

¹ See page 542.

successful treatment of two cases of malarial fever with methylene blue, this treatment was begun with the cases of malarial fever entering the hospital. So far, only five cases have been treated.

One case of tertian ague yielded immediately to methylene blue, 0.1 five times a day. No rise of temperature after beginning of treatment; no organisms in the blood after the third day.

A severe case of quotidian ague had one chill twenty-six hours after the beginning of the treatment (methylene blue 0.1 every four hours), and a lesser rise of temperature without chill, on the two successive days. After this the temperature was normal; no plasmodia seen after ninth day.

In a case of chronic malaria, with pigmented crescents and small intracellular hyaline bodies in the blood, no organisms were seen after the ninth day under methylene blue 0.2 four times a day.

In two cases of severe chronic malarial remittent the temperature fell to normal in a few days, but there were occasional returns of slight fever, and the organisms—hyaline bodies and pigmental crescents—had not entirely disappeared in forty-one and twenty-three days respectively. (In the former case, after eleven days treatment with quinine, a moderate number of organisms was still present).

In all the cases the drug was given as a powder in capsules. Slight burning sensations with micturition were usually present after taking the drug, and were relieved by small quantities (one-fifth of a teaspoonful) of powdered nutmeg several times a day. The urine, under treatment, was of a deep blue color. The fæces when passed were not colored; but on exposure to air turned rapidly blue. The sweat and saliva were not colored.

The number of cases yet treated is, of course, too small to give a sufficient basis for any definite opinion as to the relative value of this drug and quinine. The experience is sufficient to show that methylene blue has a definite curative influence on malarial fever, and to warrant its further trial.

DR. I. E. ATKINSON said that the discouragement which one nearly always finds in treating malarial diseases with other remedies than the derivatives of cinchona bark, is due to the extreme usefulness of cinchona bark itself, for it is so promptly antidotal in its effects in these disorders that we are apt to be discouraged and not persist in the treatment by other agents. The testimony given to us by Dr. Thayer seems to show that in methylene blue we have another agent in the treatment of these disorders. The effects of the use of quite dissimilar drugs in these diseases is remarkable. Of course we all know the value of arsenic as an anti-malarial remedy, and we know that iodine possesses properties in this direction inferior to quinine, but still pronounced. Some years ago, prompted by some papers published by a physician connected with the English army in India, who claimed that iodine had properties equal to cinchona bark, Drs. Atkinson and Hiram Woods made some observations on the treatment of malarial intoxication with iodine.

The results of these investigations showed that while iodine has undoubted anti-malarial properties, yet in a large proportion of cases it will fail absolutely. There is a wide range of remedies that possess this anti-malarial property, and which would be valuable if we did not have cinchona bark to use. The investigation reported by Dr. Thayer is most interesting and important, and further progress will be awaited with interest.

DR. HARRY FRIEDENWALD read a paper on cholesteatoma, or pearl tumor of the ear. Cholesteatoma is a bright white growth of pearly luster and smooth surface, made up of distinct layers placed concentrically over each other; has no blood vessels, and when examined microscopically is seen to be made up of layers of large, flat, non nucleated polyhedral cells, stratified in layers. These cells are, in every respect, similar to the cells of the outer layer of the epidermis. Between them are found cholesterine crystals. The growths occur in the middle ear and in the mastoid cells; here they lie in cavities which they frequently enlarge to very great size. The cavities have a very smooth surface, and are lined by a very fine membrane which consists of a layer of periosteum upon which lies a rete malpighii. This is the capsule which surrounds and produces the growth. These growths are often found in cases of chronic suppurative inflammation of the middle ear, with perforation or destruction of the drumhead, and frequently with polypi. But these growths have also been found without any other or any previous disease of the middle ear, and with a perfectly normal drumhead. It has likewise been found in other cranial bones and in the pia mater.

Three cases of cholesteatoma, one small, one with a minute perforation in Shrapnell membrane, a second larger, in which the outer bony wall of the middle ear had been completely destroyed, and a third very large and occupying a great part of the mastoid cells which had perforated both externally and internally into the cranial fossa, were described.

The various views regarding the origin of cholesteatoma were then discussed. Virchow regards it as a heteroplastic tumor, whether found in the pia mater or in the bones of the skull, and analogous to epithelial carcinoma. Other observers find its origin, in accordance with this view, in the embryonic development of the labyrinth from an involution of the epiblast; or in an involution of the epidermis in the first bronchial cleft whose destiny it is to develop into the eustachian tube and middle ear. A view distinctly different from the above is that cholesteatoma is a desquamative process of the membrane lining the middle ear; that it is an inflammatory product which is retained in the spaces of the middle ear and by gradual accumulation forms a tumor. This is the theory of Von Tröeltsch. The difficulty encountered here lies in explaining how a cavity, normally lined by a mucous membrane, can cast off cells of an epidermoid form, and even more, can take on all the characteristics of epidermis with a well-defined rete malpighii. Von Tröeltsch believed that the products of inflammation by irritating and pressing upon the mucous membrane caused the desquamation. This view has many adherents who believe that the same process converts the mucous membrane into epidermis, and recently it is claimed that analogous changes are found in simple ozæna, the ciliated mucous membrane of the nasal cavity being changed into epidermis. Another manner of explaining the change of mucous membrane into epidermis has been advocated by Wendt, Habermann, and Bezold. It is claimed that when large perforations exist, and especially when the drumhead becomes adherent at the edges of the perforation with the inner wall of the middle ear, that the epidermis of the drum membrane "gains ascendancy over the mucous membrane and extends with much greater rapidity over the entire district." Bezold goes further, and claims that a simple tubal catarrh is frequently a cause of retroaction and perforation of Shrapnell's membrane, that the edges of

the perforation adhere to the walls of the space within, that extension of the epidermis over the walls of these spaces will follow, the cavity be filled by desquamation, and the nucleus of a cholesteatoma formed. Thus Bezold explains the fact that the upper part of the middle ear is often the seat of cholesteatoma, and that cholesteatomatous matter was found in all his cases of chronic suppuration with perforation of Shrapnell's membrane.

In conclusion, if we bear in mind that cases of cholesteatoma have been reported without any history of previous inflammation, while, on the other hand, it is certain that many owe their origin to inflammatory affections of the middle ear, we will hesitate to accept any one explanation as the only one. As is frequently the case in other matters, so here it is probable that the various theories do not conflict, but each serves as the true explanation for different cases; or, as Kuhn puts it: "Cholesteatoma of the temporal bone is either a true heteroplastic tumor, as Virchow believes it to be in all cases, or it may also develop, and, in perhaps many cases, in the course of chronic suppuration of the middle ear from epidermis which has grown into the tympanic space from the perforated drum or the external auditory canal, and which has slowly and continually kept shedding its horny layer, and thus forming the stratified cholesteatomatous mass."

DR. HIRAM WOODS, JR., said there was very little written about this subject in any of the books published in the English language. Of all the books to which he has access, Roosa is the only one in this country who makes mention of it under the name of cholesteatoma. Another name which has been given to these tumors suggests a possible origin of them in some cases. They have been called adipocerciform tumors. They usually occur in cases of chronic suppuration of the ear, and in that particular variety where drainage is exceedingly difficult, as in the perforation of Shrapnell's membrane. It is a well-known fact that where inflammatory products cannot be removed on account of difficulty of drainage, poor vascular supply, or other causes, these products gradually undergo fatty degeneration, and caseation may take place in them. Cholesterine is one of the characteristics of the process of caseation, according to Green, and it would seem that the ordinary degeneration of pent-up inflammatory products might account for, at least, a certain class of these cases. They cannot all be accounted for on any one theory.

DR. W. H. WELCH agreed with Dr. Friedenwald in believing that there are various causes. It is not an anomalous occurrence to have cylindrical epithelium transformed into flat epithelium, as takes place in some of these cases in the ear. We have analogous changes in mucous membranes in other parts of the body. Virchow has described a condition of pachydermia laryngia in which the epithelium of the larynx becomes transformed into laminated flat epithelium. Another illustration is a prolapsus of the rectum, in which cylindrical epithelium becomes transformed into epidermis. The same is true of the mucous membrane of the prolapsed uterus. Virchow has also described the transformation of ordinary epithelium into ciliated epithelium. There is sometimes found on the peritoneum ciliated epithelium where we should have ordinary epithelium. There is nothing unique or particularly unusual in the mere transformation of the epithelium of the tympanic membrane into epidermis. Other cases present too much of the character of destructive tumors to suppose this to be the only explanation. Many of these are

doubtless real tumors, which probably rest upon an abnormality of embryonic development; epiblastic structures become displaced and grow where they ought not to be. One severe case of pearl tumor seen by Dr. Welch, was reported by Dr. Coring.

DR. FRIEDENWALD, replying to Dr. Woods, said that such processes of degeneration and disintegration of the products of inflammation are very common in all sorts of chronic inflammation of the middle ear; but the products of such disintegration are quite different from products found in the cases described. There we have broken down pus cells and disintegrated matter, but no flattened epithelium.

DR. WELCH was asked by Dr. Friedenwald if in cases of prolapsed rectum the epithelium is changed into real epidermis, with a rete malpighii formed and flat cells losing their nuclei, as on the skin, and replied that he had examined several such cases, and in them there is hardly a rete formed; but we have, from below upward, the cells gradually becoming flat, the topmost layer composed of real horny cells, as in the skin.

WM. L. WATSON, M.D.,

Secretary.

ISOLATION IN INFLUENZA.—Viewing influenza in the light of recent researches upon acute specific fevers, there is everything to warrant us in the induction that it is a germ disease; the analogy is complete. My object in this fragmentary contribution is to draw attention to an experiment which to my mind proves that it is not "in the air," in the commonly accepted sense of the term, but passes from the sick to the healthy in much the same manner as do ordinary infectious fevers. Twickenham has been ravaged by the disease. The Metropolitan and City Police Orphanage here, containing nearly 300 souls, is under my medical care. When the disease appeared in our neighborhood, I was particularly desirous that the Orphanage should not be attacked. My time being very fully occupied in coping with the disease amongst the inhabitants of the district, I was especially anxious not to have a sick orphanage under treatment at such a time; added to which, the known tendency of many of the orphans to suffer from pulmonary complaints (many of the fathers having died from phthisis) induced me to take especial care for their safety. I therefore prevailed upon the authorities to institute a most rigid system of isolation. The children were not allowed to go to church, the officers were entreated to keep within the walls and grounds of the building, all visiting was stopped both of parents and friends, and the "old boys' day" on Whit Monday (when former pupils come from all parts to visit their old home) was suspended. Now, although the disease has prevailed all around the institution, even in the head master's house, which is situated near the school, I am pleased to be able to state that no case has occurred amongst the inmates. I consider this is a conclusive proof that the disease is not "in the air," otherwise, the children must have shared the fate of the surrounding families; but that it passes from the patients to their friends and neighbors, and those who come into immediate contact with them, in the same way as do measles and scarlet fever. In previous years, when epidemics of scarlet fever and measles have prevailed in this neighborhood, we have always endeavored to preserve the children from infection by adopting the same means as are now in force against influenza, and our success has been nearly as complete. My object in publishing this is to show that influenza can be dealt with as successfully.—Leeson, in *The Lancet*.

The Times and Register

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QUACK ADVERTISEMENTS IN THE RELIGIOUS PRESS.

NEARLY every physician can recall instances where the use of quack remedies and secret nostrums has been not only injurious, but fatal, directly or indirectly. Recently a clergyman in the incipient stage of typhoid, dosed himself with drastic quack pills, until his case was hopeless. Elderly people and children are the greatest sufferers, because they have less vitality and resisting power to mal-treatment.

It is a curious fact that, notwithstanding the frequent criticisms and serious consequences which follow the reckless admission of advertisements, especially in the religious press, the evil continues as before. Why the reputable moral teachers in the press should sell their influence for the basest purposes is unaccountable. The religious press has a much larger number of credulous confiding readers than other papers, and for this reason it is literally criminal to spread out before them swindling schemes and tacitly indorse them. The *New York Christian Advocate* is a model paper in this respect. They decline a financial advertisement if the interest promised is larger than 8 per cent. They will not permit in a patent medicine advertisement the word cure. They have refused piano advertisements where the maker was of doubtful reputation. They decline to admit advertisements of any kind of business containing the indorsement of any Christian minister, and all advertisements in which there are very extraordinary inducements made to influence sales. All advertisers in the *Christian Advocate* must be men of reliability.

In contrast to this the reader has only to turn to almost any religious paper, and note the number, and glaring space occupied by some of the most dangerous swindling schemes known. In an influential organ of a large religious body, there are every week over fifty different advertising frauds. These

consist of swindling stock sales and catch-penny plans; abortion remedies, and all sorts of specifics for incurable diseases; electric belts and nostrums for venereal disease; alcohol and opium cures, and offers to hire agents to sell secret remedies. In brief, almost every fraud that can be concealed and invested with mystery is found in this paper. These advertisements are not new or unknown, but consist of all the old, long-ago exploded schemes, whose authors and methods have been exposed many times.

The approach of the holidays bring out a larger number of these advertisements than ever. The temperance papers have caught the infection. The *Union Signal*, the largest in circulation of any paper published as a reform organ for women, and *The Voice*, the great prohibition paper, both exhibit on their advertising pages the most dangerous quack remedies and disreputable swindles.

Like the religious press, they preach righteousness, temperance and judgment to come, in one prayer, and in the other teach and indorse fraud, rascality and criminality in its lowest aspects.

While this is not a new topic, and has been many times mentioned by the medical press, it is one of intense interest to every medical man.

The many swindlings by these fraudulent means form a small part of the real injury done. The loss of health and the neglect of proper medical advice and means at the curable stage, are often fatal mistakes. The glaring assertions of positive cures indorsed by clergymen and appearing in religious papers, have led many poor victims to destruction.

Recently many cases have come to light where the alcoholic specifics have made opium and cocaine inebriates. The imbecile children that are made by the use of teething nostrums are a legion. The list might be extended to great length, and be supported by the experience of physicians in every town and city in the land. The duty of the profession is to absolutely refuse all religious papers, which, as teachers of moral and higher truths, insult their readers by a display of the lowest and most wretched schemes to swindle and destroy the health of their patrons. We demand of the religious and literary press an equally high standard of morals in their advertising pages, and freedom from fraud and imposition.

An abortion advertisement and a scheme to make 30 per cent. on an investment all on the same page, with an urgent appeal for a higher manhood and more spiritual culture, have a suspicious look.

A sermon on besetting sins, followed by a notice of a retired clergyman, who has a consumptive prescription to give away, and an offer of a book on lost manhood, or a dismal picture of the ravages of inebriety, followed by several announcements of sure and painless cures for alcohol and opium diseases, are sadly suggestive of great need of change at home.

A united effort and sentiment on the part of physicians would make a radical change in this field. If the medical press would again take up this subject, and print from different papers full illustrations of these terrible and far reaching evils, a distinct reform would follow.

T. D. CROTHERS.

Annotations.

A CHANGE in the location of this journal has been under advisement for some time; but the opposition to it on the part of our subscribers and advertisers was so determined, that the project has been given up, and the publication office will continue in Philadelphia as heretofore.

M^R. LAWSON TAIT winds up a letter upon the modern treatment of uterine myoma, with the following astounding statement: "Finally, I condemn the whole thing (electricity), because it is becoming a fertile field for quackery, the lamentable fate of every attempt made to apply the electric current for the relief of human suffering."

T^HE staff of this journal is not yet complete. We are still in need of persons who can decipher Japanese, Danish, Russian, Roumanian and the illustrations in the *British Medical Journal*. It is one of the inscrutable mysteries, that a journal so ably edited, with 17,000 subscribers and an enormous advertising patronage, should allow its pages to be disfigured with such unsightly blotches. In the last number is a short paper on atavism, quoted in another column. The author mentions an exceedingly interesting point that should be shown in the illustrations, but is not.

A^BRAHAM S. GERHARD, A.M., M.D., Professor of Clinical Medicine and Medical Jurisprudence in the Medico Chirurgical College, of Philadelphia, died on December 16th, of influenza and œdema of the glottis. Prof. Gerhard was a graduate of Franklin and Marshall College; a fine classical scholar and highly respectable as a practitioner. He was one of the original members of the faculty of the Medico Chirurgical College, being Professor of Physiology when it first opened its doors. He quickly demonstrated his ability, becoming one of the best lecturers and most successful didactic teachers in the city. In every position filled by him in the college, he acquitted himself with credit, winning the respect and affection of his class and his colleagues by his unassuming modesty, his versatile ability, and the conscientious manner with which he performed every duty assigned to him.

Dr. Gerhard was unfortunate in contracting blood poisoning from a patient, the result being a long and painful illness, and a hemiplegia, from which he never entirely recovered. This, with the labor incident to a practice that had greatly increased during the last few years, probably helped to reduce his vitality, so as to render him unable to resist the attack of the disease which caused his death. He leaves a wife and family, his oldest son having just graduated in medicine. As a brilliant teacher and a loyal, true-hearted Christian gentleman, Prof. Gerhard will be regretted by all who had learned to know him for what he was.

INFANTILE ATAVISM.

L^OUIS ROBINSON (*British Medical Journal*) has made some very interesting observations upon infants in a British workhouse. It is well known to every Darwinian student that animals show their resemblance to their ancestors in infancy or in foetal life, much more than when full grown. Thus,

young lambs show their mountain origin by always seeking the highest point of their range while at play. Young lions are irregularly spotted, indicating their descent from the great forest launting cats, although when grown to maturity they are tawny, like other desert denizens. Certain distinctive habits in young animals were absolutely essential as means of self-preservation in the era of wildness. Among these are the extraordinary galloping power of the colt, and the instinct of the calf to conceal itself. Dr. Robinson had also noted the great development of the muscles of the shoulder and forearm of the foetal child, and this had directed attention to the singular strength of the new-born ape's grip, when seizing hold of the mother or the tree. Du Chaillu called especial attention to this, and to the danger to which the ape would be exposed were its grip to be relaxed. The theory of Darwin that we are descended from a tree-climbing ape led Robinson to test the strength of the grip in infants, as this seemed to be a habit indicating a means of self-preservation in remote ages that would probably be still evident, from its vast importance to the anthropoid ape and the primitive man. It was found that even in human infants prematurely born there was a notable grasping power, and that the strongest were able to hang by the hands and support their whole weight for over two and a half minutes. Nearly all the infants experimented upon were under a month old.

Book Notices.

LESSONS IN THE DIAGNOSIS AND TREATMENT OF EYE DISEASES. By CASEY A. WOOD, C.M., M.D., formerly Clinical Assistant, Royal London Ophthalmic Hospital (Moorfields); Microscopist and Pathologist to the Illinois Eye and Ear Infirmary; Professor of Ophthalmology, Post-Graduate Medical School; Oculist and Aurist to the Alesian Bros. Hospital, Chicago. With numerous wood cuts. pp. 154. Detroit, Mich.: George S. Davis, 1891. Cloth, 50 cents; paper, 25 cents.

A manual of those diseases thought by the author to be most frequently overlooked by the general practitioner.

REPORT ON CHOLERA IN EUROPE AND INDIA. By EDWARD O. SHAKESPEARE, M.D., U.S. Commissioner. Washington: Government Printing Office, 1890.

This huge volume, of over 900 pages, contains the results of four years' study of the subject, in the course of which the author traveled in Spain, France, Italy and India, visiting the localities in which cholera prevailed, and making bacteriological studies of the disease as he found it. The work is illustrated by maps, lithographs and tables, of considerable value and good execution. We are unable to give this cyclopædic work the space it deserves. The labor expended upon it has been enormous, and the book is alike a monument of the industry of the author and the wisdom of the Government, under whose auspices the work was done.

SAUNDERS' POCKET MEDICAL FORMULARY. With an appendix containing posological table, formulæ and doses for hypodermic medication, poisons and their antidotes, diameters of the female pelvis and foetal head, diet list for various diseases, obstetrical table, materials and drugs used in antiseptic surgery, etc. By WILLIAM M. POWELL, M.D. Philadelphia: W. B. Saunders, 913 Walnut street, 1891. 12mo. pp. 291. Price: cloth, \$1.50; tucks, \$1.75.

A new formulary, embracing much material from the latest works on practice and on therapeutics.

JAHRESBERICHT UBER DIE FORTSCHRITTE AUF DEM GEBIETE DER GEBURTSHILFE UND GYNAKOLOGIE. Herausgegeben von Prof. Dr. Richard Frommel, in Erlangen. IV. Jahrgang. Bericht über das Jahr, 1890. Wiesbaden: Verlag von J. F. Bergmann, 1891.

The Medical Digest.

GOLDEN RULES OF SURGICAL PRACTICE.

[These rules are from the pen of a London hospital surgeon. They contain so much valuable material, expressed so well, that we have decided to reproduce the paper entire in our columns.]

ABDOMEN.

ALWAYS avoid purgatives in treating a patient who has swallowed a foreign body. Give opium and constipating food—boiled eggs, cheese, puddings, potatoes, etc.

Never close any wound of the abdominal wall till all hemorrhage has ceased.

Never, under any circumstances, apply pressure to a wound of the abdominal wall to arrest hemorrhage.

Never mind increasing a superficial wound of the abdomen in order to remove a foreign body or to secure a bleeding point.

Never probe any wound in the abdominal wall.

Never forget that all abscesses of the abdominal wall should be opened freely and at once.

Never hesitate or delay to open and drain an abscess in the loin due to rupture or injury to the kidney.

Never procrastinate in strangulated hernia. It is not usually the operation which will prove unsuccessful in herniotomy; the danger lies in your allowing the bowel to become irrecoverable.

Never be deceived by an opiate masking the acute symptoms of hernia, obstruction, peritonitis.

Never tap a suspected renal tumor through the abdominal parietes, *i. e.*, through the peritoneum.

Always relax the abdominal wall after suturing.

Never ligature *en masse* in cutting off omentum. Do it piecemeal.

[The constricted edge of the apron of omentum may unravel, and fatal hemorrhage result.]

In protrusion of the viscera never neglect to pass your finger fairly through the wound to make sure that the reduction has been complete.

And be careful never to push the bowel into an interstice between the muscle or into subperitoneal tissue.

ABSCESS.

Never try fluctuation *across* a limb, always *along* it. Never forget that:

1. Abscesses near a large joint often communicate with the joint.

2. Abscesses near a large artery sometimes communicate with the artery.

3. Abdominal wall abscesses sometimes communicate with the gut.

Never forget that *early* openings are imperative in abscesses situated:

1. In neighborhood of joints.

2. In the abdominal wall.

3. In the neck, under the deep fascia.

4. In the palm of the hand.

5. Beneath periosteum.

6. About the rectum, prostate, and urethra.

Remember the frequency with which hæmatoma and traumatic aneurism have been mistaken for abscess, and incised; and remember, also, that in extravasation below the gluteal fascia there is rarely any sign of bruise or injury to the skin. Never incise such without auscultation or exploratory puncture.

Never plunge; never squeeze in opening abscesses.

Do not forget that your incision should radiate:

1. In abscesses pointing near the nipple.

2. In abscesses near the anus.

3. In scarifying the chemosis of the cornea.

And that your incisions should be longitudinal:

1. In the hand.

2. In the urethra.

3. In the scalp.

Do not forget that incisions in the neck and face should run parallel with the wrinkles and folds.

Do not be afraid of hurting the lacteal tubes in mammary abscess. More harm is done to the gland by the enlargement of the walls of the abscess than by a free incision.

Never make a palmar incision, except in the middle of the lower third and in the axial line of the fingers, or at the sides of the palm.

Do not open an abscess anywhere near a large artery without first using a stethoscope, and then only by Hilton's method (*i. e.*, director and dressing forceps).

Never, under any circumstances, use for exploratory puncture that surgical abomination, a grooved needle, for it will allow contamination of all the tissues through which it brings the fluids (Thornton).

In opening a deep abscess in the lumbar region, without the projection of an abscess, do not forget to cut down opposite a transverse process, and not between them, for fear of wounding a lumbar artery.

ANEURISM.

Never attempt to cure an aneurism by the formation of a thrombus if the patient has any aseptic condition (such as an abscess, sore, suppurating otitis), for such may induce yellow softening of the clot.

ARTERY-BLEEDING.

Always tie both ends of a divided artery in a wound.

BLADDER AND URETHRA.

Never neglect to pass your hand over the patient's belly in typhoid, or any fever, injury, or fracture of the spine, compression, etc.; for the bladder may be atonic and injuriously distended without distress.

Never use force in passing a catheter in fractured spine, because of the *insensitiveness* of the urethra.

Never pass a urethral instrument upon a man without having first passed one on yourself.

Never pass an instrument if your patient is suffering from an acute inflammation of the testicle—unless you are relieving retention, or unless testitis occurs in a patient habitually using a catheter.

Do not permit yourself to talk glibly of "impassible" stricture. Such cases are rare. Patience and a little sweet-oil often carry an instrument through.

Never do an internal urethrotomy until you ascertain that your patient is free from undue erections, because of hemorrhage. If the organ is irritable, exhibit bromide of potassium for a few days prior to the operation.

Never put on cantharides blister in nephritis because of absorption (use liq. ammon. fort.).

Do not forget that irritability of the bladder is often due to *renal irritation* and reflex actions.

¹ "A probe in the hands of a dirty or rough surgeon is like a loaded pistol in the paw of a monkey."

Never inject more than four ounces at a time into the bladder, and that only with care.

BONES.

Always hesitate to diagnose in an off-hand way "rheumatic" pain in young children. Remember acute periostitis simulates acute rheumatism closely.

Never delay in acute periostitis in cutting freely down to a bone as soon as the nature of the case is detected. Every hour of delay will need a month to repair.

Do not forget the three golden rules in acute periostitis:

1. Prompt incision.
2. Free incision.
3. Free drainage.

Remember secondary abscesses may form in acute periostitis. Be on the *qui vive*.

Do not fret if, on making incisions to the bone, you evacuate but little pus in periostitis. It makes no matter, the relief afforded is often the same.

Remember the golden rules for removing segments from long bones after necrosis:

1. Do not wait for the periosteal sheath (new bony sheath) to have acquired strength enough to preserve the continuity of the limb.
2. Always remove the sequestrum as soon as possible, for it is:

- (a) A permanent source of irritation.
- (b) A danger to the adjacent parts.

3. Do not leave any dead bone behind.
4. Always splint carefully and bandage to maintain the parts in apposition and prevent fracture.

Never forget that there is no periosteal sheath in the necrosis of the popliteal space, and that the exfoliated bone lies close under the popliteal artery.

In removing such avoid four things:

1. Joint.
2. Artery.
3. External popliteal nerve.
4. Rough manipulation.

Scratch with finger nail and scalpel of knife. Do not use the knife.

BREAST.

Never forget that a "tumor" in a young woman's breast is not unusually a *chronic* abscess.

Never procrastinate about a tumor of the breast in a female over forty.

Never excise a mammary tumor of doubtful character before cutting it across.

Never remove a true carcinoma of the breast without clearing out the axilla.

Never be too anxious to make your flaps meet and look well in removing a cancer of the breast. Your vanity will often tempt you to leave a flap in which cancer may lie concealed.

BURNS.

Do not neglect opium for the shock of burns in children, but use it cautiously; afterwards do not stint fresh air, food, or warmth.

Never give a hypodermic in burns of children; you cannot recall it. Give it by the mouth.

Beware of strong application of carbolic oil in burns, and if it be used at all, watch the urine for absorption signs.

Do not dress too often; but never let the dressings foul.

Never uncover the entire wound at once; do it piecemeal.

Never omit chloroform or opium in the first dressing of extensive burns.

Always have the tracheotomy instruments at hand in burns or scalds of mouth, because of oedema of glottis.

CHEST.

Do not be very solicitous in obtaining crepitus of a fractured rib. Treat it as such.

In manipulating either side of the fractured rib to obtain evidence of undue mobility, do not handle portions of two different ribs.

Never forget that all penetrating wounds of the chest, not involving fracture, should be closed at once.

Do not forget that it is a good practice in severe cases of fractured ribs, and those in which the lung is wounded, to strap the chest and apply ice externally.

[Bandage is said to be contra-indicated if there is much comminution or tearing of the parietes of the chest; or:

1. If dyspnoea increases, on its application.
2. If pain is caused by it.]

Do not strap or bandage if there is much surgical emphysema.

Always regard rib injuries in old people with anxiety.

[There may be, and usually is, pre-existing emphysema and bronchitis, which will hamper the breathing greatly.]

Never tap a chest in paracentesis without making certain, by auscultation and percussion, that you are on the right spot.

Do not neglect to secure your drain tube from slipping into the thorax. Let it be sufficiently, and only sufficiently, long to enter the cavity. Longer is needless.

Always use an exhaustion syringe in tapping the chest.

Never forget in this, as in all other aspirations, to run some carbolic or hydrarg. perchlor. solution through your canula and exhaustion bottle before operating.

Always use an exploring syringe first, if you are in doubt.

Do not forget your land-marks (upper border of lower rib).

Always remember that you aim at the lung rising up and taking the place of the fluid you evacuate. If the lungs are bound down by adhesions and attempts are made to exhaust the fluid with considerable force, rupture and hemorrhage take place.

Do not forget, also, that too forcible a suction applied to the vascular false membranes, which often occupy the pleural cavity, may give rise to hemorrhage into the pleura.

Always stop if pain is complained of.

DISLOCATION.

Never attempt to reduce a dislocation of humerus in an old person without first examining the state of the arteries to inspire you with caution and gentleness.

Never put a *booted* foot in the axilla to reduce dislocation.

Always reduce by some other method if ribs are broken on the same side.

Remember that injuries to the elbow joint are often very difficult to diagnose, if much swelling co-exists; but:

Never give a positive opinion of an elbow joint until you have carefully examined the relations of the olecranon, internal and external condyles, and head of radius.

Remember that in dislocation at the elbow the joint becomes rapidly irreducible.

Never forget that a faulty diagnosis may cause loss of motion in the joint.

Never be ashamed to say you "do not know" until the swelling has subsided, and you are able to be certain of the character of the injury.

Do not forget in dislocation of the carpal bones that the great point is to see that the motions of the fingers are early restored.

E.A.R.

Never forget that rupture of the membrana tympani, or even fatal consequences, may ensue from roughness.

Never forget that vegetable substances swell in the auditory canal on the application of water.

Remember no foreign body in ear, except living insects or vegetable substances, can do harm. Syringe gently, unless the foreign body is likely to swell.

ERYSIPELAS.

Support and stimulate in erysipelas; never deplete or depress.

Do not dress operation or fresh wounds, or attend midwifery, if you are dressing a case of erysipelas; or, in fact, any infectious disease.

EYE.

Never prescribe for an inflamed eye without doing three things, viz :

1. Without examining for a foreign body imbedded in the cornea, or lodged beneath the lids.
2. Without seeing if cornea or iris is implicated.
3. Without determining the presence or absence of tension of globe.

Never use violence in opening the eye, if there be much swelling or spasm, because if there be a deep ulcer of the cornea present, perforation may take place.

Never apply lead lotion (Goulard water) should there be the slightest abrasion of the corneal epithelium. [Solid particles of oxide or carbonate of lead become deposited and form permanent opacities.]

Never trust the nurse with verbal instructions for washing out the baby's eyes in infantile ophthalmia. Do it yourself.

Never forget that wounds of the ciliary region are most dangerous, and if they involve the lens, or if they are attended with loss of vitreous, they need excision of the eye.

Never put atropine into an eye :

1. Without testing tension.
 2. Without examining for locomotor ataxia (for ataxial cases walk by sight).
 3. Without due care as to strength in old people.
- [N. B. Beware of atropine, ergot, colchicum in old people.]

FRACTURE.

Remember that crepitus may not be obtained in :

1. Riding of fragments.
2. Impaction of fragments.
3. Entire separation of fragments.
4. Muscle or blood clot interposed between fragments.

Remember that there is a pseudo crepitus, very like true crepitus, in teno-synovitis, joint effusion, and caries of a joint surface.

Do not forget effusion in or around the dislocated head of a bone sometimes leads to a creaking or crepitus closely resembling that produced by a fracture.

Do not be anxious to get crepitus in such fractures in old people.

Always suspect a bone that is fractured on slight violence, *i. e.*, suspect central sarcoma.

Do not forget that in epiphyseal fracture your prognosis must be guarded, because such injuries in the young are followed sometimes by suspended growth of the bone, producing deformity apparently as the result of degeneration of the cartilage after injury, whereby it loses its power of ossification.

Remember in separation of epiphysis the line of fracture is so broad in the upper extremity of the humerus and the lower extremity of the femur, that there will be no shortening, but the fragments will project.

In all fractures of limbs always examine the pulse below at once.

"In setting" fractures never neglect to fix the joint near the fracture.

Never allow the splint to press on the skin, so as to cause ulceration or cedema, far less gangrene.

Do not, in fracture of the acromion, put a pad in the axilla, or bandage the elbow too slightly to the chest, because the head (the natural splint in such fractures) is thrown outward and the fragments separated.

Never forget to examine every case of fracture of humerus high up, in order to ascertain if the head be dislocated or not.

In adapting a sling to the forearm of a patient with fracture through the middle of the shaft, do not let the sling be so short as to press the elbow upward.

Never delay in fracture involving the elbow joint to commence passive motion the seventh day—at least not later than the fourteenth day.

Always warn your patient of a probable deformity in a Colles' fracture.

In Colles' fracture do not splint the palm of the hand; leave the fingers free, and work them.

Remember that the extracapsular is certainly more common in old age than the intracapsular fracture.

Do not forget that the so-called absorption and change in the neck of the old femur is not so common as is taught.

Never use violence in injuries to the hip, in order to produce crepitus; much injury may be done in separating an impaction.

Do not keep your *old* patients in bed in order to get union in hip fracture. They are almost sure to suffer from sloughing produced by splints or from bed sores, and will very likely die.

Never forget to bandage the entire limb in fractured femur.

Remember the danger of traction by an extension weight if a fracture be transverse above the condyle [the popliteal artery is brought into contact with the sharp edge of the lower fragment].

Always shampoo the quadriceps in a fractured patella, provided the state of the soft parts permits it.

Never place fractures in plaster-of-Paris splints, or other splints, which withdraws the seat of fracture from the surgeon's observation, if there be bruising, or until such has subsided, and guard against subsequent swelling by padding.

Never use this treatment without explaining the danger to the patient, and obtaining his consent.

GANGRENE.

In gangrene do not mistake the line of discoloration for the line of demarcation. The former may move; the latter, never.

Do not neglect the only drug of use—opium.

Do not hurry separation of sloughs in frost-bite gangrene.

GENERAL.¹

Never use a hypodermic syringe in a secondary syphilitic patient.

Never permit a wet-nurse to be employed without examining into her history and state of health.

Never permit a healthy wet-nurse to suckle a syphilitic child, or child of syphilitic parents.

Never be hasty in suspecting "malingering" in any disease, certainly never in head injuries.

Never neglect to carefully bandage the *entire* limb if you have encircled it at any one point to keep up pressure upon a wound.

Always shampoo gradually and with caution, as early as seems prudent, and at first with prolonged intervals of rest.

Remember three drugs are tolerated well in proportion to their need, viz.: Opium, mercury, and iodide of potassium.

Always inject ergotine or mercury into muscle, but morphine or brandy under the skin.

Never inject morphine without first testing the urine for albumen or a low S. G.

Never leave a sprain too long at rest. Too long rest is by far the most frequent cause of delayed recovery after injuries of the joints.

Avoid cathartics, deprivation of nourishment, loss of blood by incision in the broken down.

Be careful of abstracting blood from a drunkard or a child.

Be careful of opium in delirium tremens when the pupils are contracted.

Never examine any female under any circumstances without having first obtained her consent, and in the presence of one (or more) reliable witness.

Never examine any female prisoner without consent—without cautioning her that the examination will be taken down in evidence, and without a female companion being present.

Never administer chloroform without a third person being present, nor allow it to be administered in your house—nor until all artificial teeth have been removed.

Do not form hasty opinions, and if you have formed a false opinion admit your error at once.

GENITAL—PENIS.

Never sanction a lengthened or adherent prepuce—circumcise.

Never despise any skin in stitching up scrotal wounds—the worst flap will heal.

[Warm a wound of the scrotum before uniting it with sutures.]

Always slit the urethra downwards in amputation of the penis, and stitch the angles outward.

Always keep a catheter in position continuously in injuries to the penis, if the urethra is divided.

Do not tap a hydrocele without examining the position of the testicle with the light.

Do not strap a testicle without shaving the scrotum.

Do not give a decided prognosis of a solid slow-growing tumor of the testicle in which hydrocele co-exists, before you have tapped the hydrocele and examined the gland carefully. It may be non-malignant. If any doubt exists after this, advise a free incision.

GONORRHOEA.

Never neglect to warn your patient about his eyes in treating a "first" attack of gonorrhoea.

In giving a "first" case of gonorrhoea copaiba, always warn your patient of the possibility of the eruption.

Never neglect in treating gonorrhoeal rheumatism to cure the discharge as speedily as possible.

In examining the cause of a knee synovitis of a young man never omit to examine the penis for gonorrhoea or gleet.

In inquiring into a history of syphilis do not hastily judge of the statement of the patient that a rash was syphilitic; inquire about copaiba.

Never use an injection if there is much pain, scalding, or inflammation, unless it be cocaine.

Never forget many gleets are due to slight contractions of the canal, and may be cured by a steel bougie.

HAND AND FOOT.

Do not forget that it is wiser in cases of supposed needle in hand or foot, when the patient is not suffering much inconvenience, not to cut down unless the end of the needle is felt.

Never estimate the amount of flat foot when your patient is *sitting*, because the weight is taken off the arch.

Do not forget that the foot may be amputated for supposed strumous disease of the tarsus when, on examination, the affection might have been proved to be limited to one of the tarsal bones, and the patient might have been cured by a less extensive mutilation.

Do not despise or neglect corns, bunions, or ulcers of the leg in the aged, or diabetic. They often start gangrene.

HEAD.

Do not forget that an injury to the head is never too slight to be despised, and never too severe to be despaired of.

Never be precipitate in opening a hæmatoma of the scalp.

Never close a scalp wound until or unless all dirt is or can be removed.

Never hesitate to suture contused and lacerated wounds, but in doing so do not forget the drainage.

Never put stitches in deeply; there is no reason to wound the tendon.

Beware of cellulitis of the scalp when the dangerous layer of the scalp has been opened. In such cases do not be afraid of incisions, only let them be run from before backwards, be 2 inches in length, and down to the bone. In these cases beware of depletion or deprivation, because they occur in the broken down.

Never neglect to examine the sub-occipital glands as an index to:

1. Erysipelas of scalp.
2. Pediculosis.
3. Syphilis.

Do not hesitate to trephine if the skull cap is exposed—if there is definite signs of localized paralysis, and if there is no suspicion of general pyæmic infection.

Never forget that a blow on one side of the skull often produces its main effects on the opposite side of the skull.

Do not mistake the depressed center of an extravasated blood-clot or congenital malformation, or atrophy, for depressed fracture, or the sutures for a linear fracture.

Remember that the more a fracture approaches the punctured form the greater the need for the trephine. Do not forget the rule:

¹ I always recommend dressers to read Surgical Disasters in "Paget's Clinical Lectures."

If the depression is slight,
If the extent is considerable,
If no symptoms are present,
leave it, or *vice versa*, operate.

Remember that the operation for the removal of fragments, which have been pressing on the brain is rarely complete, spiculæ being often left behind.

Remember in trephining the skull that you are to consider the bone under your instrument to be the *thinnest* you have encountered.

Never undervalue the use of calomel and opium in head injuries.

HERNIA.

Never treat a case of vomiting without inquiring about hernia and examining abdominal rings.

Do not diagnose a "strangulated" hernia without first feeling, in the male, for each testis.

Never be satisfied with the reduction of a hernia without putting your finger fairly into and through the ring, and ascertaining by comparison of the two sides that no unnatural fullness is left.

Remember that no age is too young for a truss, and that no hernial protrusion should be without one.

In cases of strangulated hernia, if you are in doubt as to the advisability of operating, do not hesitate, but operate.

Do not hesitate to return the gut in herniotomy in all stages of inflammation short of gangrene.

Never procrastinate in cases which will certainly require colotomy.

JOINTS.

Do not be hasty with a knife in dealing with fluctuating swellings near a joint.

[There are changes in the synovial membrane which produce thickening and suppurating, which can with difficulty be distinguished from an external circumscribed abscess.]

Never forget that synovial tissue of thecæ embracing tendons, may pour out a considerable amount of fluid or even pus.

[The accumulation of fluid in a joint or in the layers of the synovial membrane, or in tendons and bursæ, rarely affect the integument. Therefore, unless there is external redness never use the scalpel hastily.]

Never probe the joint in clean cut wounds opening a joint, unless a foreign body is known to be lodged therein.

Always persevere with rest and counter-irritation in disease of the shoulder joint as long as there be pain produced by motion, but no longer.

[Too long confinements is apt to produce adhesion of the lower part of the capsule, and to permanently deprive the patient of the power to raise the arm.]

Always trace all sinuses near the shoulder to their source, because the tendons often direct the pus to some point distant from the joint.

Always consider the chance of subacromial bursal disease before you diagnose disease of the shoulder-joint.

Do not hesitate to aspirate a joint for diagnosis, but remember it is criminal to do so without strict aseptic precautions.

Never neglect to put all strumous joints at rest.

[Rest should be maintained for three months after all signs of disease has vanished, and active exercise must even then be very gradually renewed.]

Never neglect early movement in chronic rheumatic arthritis; never allow early movement in strumous arthritis.

Never neglect to warn your patient about stiffness in ankylosis of joints after strumous disease.

Never open a joint without rigid asepsis.

Never insist on a lengthy confined position of joints in the treatment of accident or disease of the limb itself.

Never forget whilst breaking adhesion down :

1. The atrophy of rest.

2. The buried bacillus.

3. The fragility of the child's bone.

Hence in breaking down adhesions do not omit to hold the bones as near the joint as possible. Do not do too much at once. Rupture adhesion by short movements in the way of flexion. Divide contracted tendons some days before breaking down adhesions, and put on ice bag in every case afterwards.

Beware of employing a *Brisement forcé* in tubercular joints. [Numerous cases are recorded where this procedure was followed within a few days by general miliary tuberculosis and a speedy death.]

Never attempt to overcome muscular contraction in contraction of joint by forcible extension—*tenotomise*.

Never let a child wearing a Thomas' splint have a hard bed, for the splint on a hard mattress, is thrown out into relief, and causes painful pressure.

Never forget that in serious disease of joint the rapid loss of tissue observed about a joint is never seen in hysterical joint.

Beware of the insidious onset of tubercular arthritis.

Never treat the case of a limping child lightly.

Never omit to examine the hip when pain is complained of in apparently healthy knee.

Never forget that proof of knee disease is no proof of the absence of hip disease of the same side.

MOUTH.

Never leave hare-lip pins, in hare-lip operation, longer, *if you use them*, than forty-eight hours.

Always stop to guard your thumbs before you reduce a dislocation of the jaw.

Always use blunt scissors in operating on the *frænum linguæ*.

Do not forget in *ranulæ* to search for stone in the duct.

Never think lightly of any ulcer of the tongue or lips of a patient after middle life.

NOSE.

Always suspect a foul discharge in a child to result from a foreign body, if the discharge be from one nostril.

ŒSOPHAGUS.

Always remove all artificial teeth before giving an anæsthetic.

Never forget that when a foreign body, though only of moderate size, has become fixed in the commencement of the œsophagus or the pharynx, and has resisted a fair trial for its extraction or displacement, an incision should be made at once and it should be removed, although no urgent symptoms are present.

Remember catgut sutures are used for wounds of œsophagus; never silk or silver.

Always be certain that your tube enters the œsophagus in using the stomach pump (especially, if the patient be under chloroform or insensible in drink).

OPERATIONS.

Never permit a naked light to approach the ether apparatus in anæsthetizing.

Never neglect in all operations which will produce a shock to the urinary system—*e.g.*, varicocele, fistula, piles, radical cure of hernia—to ascertain, before the operation, if the urethra canal be without stricture, for sometimes stricture is found in relieving retention after operation, and you may be unprepared for the obstruction.

Never neglect to examine the lungs in all cases of ischio-rectal disease and fistula in ano.

In inserting plugs or plug appliance for colotomy, gastrostomy, or drainage tubes for abscesses, wounds, especially in thorax, always see that the end of the plug or drain is properly secured.

Never operate without first examining the urine for albumen and sugar.

Never apply an elastic (Esmarch) bandage to render a limb bloodless if tuberculosis or gangrene is present.

Never forget a patient's age in years is not the index to his "vis" or "last." *Vide* "Errors in the Chronometry of Life," "Paget's Old Note Books."

PELVIS.

Never forget to determine the absence of a foreign body in buttock wounds.

Always ligature a bleeding vessel in the buttock at once, even at the risk of a deep dissection.

In fracture of true pelvis do not carry out passive movements very actively, in order to elicit crepitus.

Remember the serious consequences which may ensue from the displacement of a pointed fragment.

In falls on the buttock or rump, in fractured pelvis, or blows in the belly, never omit to empty the bladder, if the patient cannot.

RECTUM.

Never forget in fistula in ano to eliminate tertiary syphilitic, strumous, or dysenteric ulceration, stricture and malignant disease of the rectum.

Remember the saying, "No internal opening to a fistula, or a blind fistula is usually a blind surgeon."

Do not forget the probable need for a catheter after an operation on the rectum.

SHOCK.

In shock and collapse never forget that the essence of successful treatment is to obtain time for your patient to rally. Keep the heart going, but do not trade on its exhausted power; maintain its action, do not force it.

SINUS.

Never neglect the hint the guardian papillæ give of the irritating focus deeper down.

Never neglect the therapeutics of rest.

Never neglect to slit the forks and the burrows up as well as the sinus.

SPINE.

Never forget that in fracture of the spine the tendency to death is due to pneumonia and complications, if the fracture is situated high up, and to urinary inflammation and bedsores, if lower down.

Therefore never forget the atonic bladder or the back. The urethra is insensitive, therefore use your catheter with care and gentleness; let it be clean and smooth.

Never neglect to see for yourself that the back has been kept clean.

Never puncture a spina bifida in the median line, always at the side, taking in the skin; avoid air, and close puncture securely.

Never suspend by the head alone in adjusting a Sayre's jacket for a Pott's curvature of the spine; let the toes and armpits help to support the weight.

Never forget that the earlier stages of caries are not accompanied by any decided symptoms. When curvature exists there is no longer room for doubt, but do not wait for curvature.

Never permit a patient who has sustained an injury to the back to quit the casualty department until he has passed water. [Bloody urine will show at once that the kidney has been injured.]

SYPHILIS.

Do not adhere to the popular division of "hard" and "soft" sore.

Do not forget a sore may become hard four weeks after coition, because it has been inoculated by a mixed secretion.

Do not forget that no matter what the character of any primary sore may be, the chances are that the sequel will prove that it contained the germ of true syphilis.

Do not believe or rely upon sharply defined rules for the diagnosis of chancre; even with sores which are obviously soft and non-infecting until the incubation period (3—5 weeks) is well passed.

Do not entertain any confidence that induration will not occur; and it would be acting most unwisely to give an absolute opinion on the matter.

Phimosia acquired is so common an accompaniment of the three venereal diseases, acute gonorrhœa, soft sore, hard sore, that you ought never to express a decided opinion until you have got a look at the trouble.

Do not hesitate to slit up the prepuce, in order to examine and treat a sloughing sore. If *you* do not do it the sloughing most probably will.

Always prohibit smoking, and any diet which may lead to diarrhœa while mercury is being given for syphilis.

Never forget occasional idiosyncrasy in patients against taking mercury and iodide.

Remember the one simple rule for successful treatment of syphilis is, keep inunction and fumigation method for exceptional cases, and give small doses of mercury more or less frequently, but never large doses.

Never forget that with a patient confined to bed and on low diet, pytalism can be produced with half the dose of mercury.

[N.B.—Rapid loss of weight means that mercury is disagreeing with the patient.]

Remember that pot. iod. and mercury, except in the scrofulous and in cachetic patients, are well borne in syphilis if there is need of them.

Never neglect to warn your patient of his gums and his tendency to catch cold, when taking mercury.

For all cases of phagedæna, mercury ought always to be given.

Remember the earlier mercury is exhibited, the greater the probability that the symptoms will be wholly prevented or delayed.

Never exercise a syphilitic testis however bad, even when there is abscess and fungus testis.

Remember in tertiary syphilis whenever a case resists the iodide, and whenever it is important to obtain a rapid result, the mercury should be added to the iodide or the mercury should be given alone.

Never omit to give opium in all gangrene and sloughing wounds which do not prove amenable.

Remember syphilis may imitate all known forms of skin disease, but it can produce no originals (Hutchinson).

Never forget that lichen ruber and lichen planus are often dusky and copper tinted, and present all the features which to those of limited experience suggest a confident diagnosis of syphilis.

Remember that in rare instances syphilis imitates variola closely; there is, however:—

1. Persistence.
2. Absence of odor.
3. History to guide you.

Never let a markedly syphilitic mother suckle her child.

Never let a syphilitic child have a wet nurse.

In syphilis do not sanction marriage until two years after the date of infection, and then only if the patient is free from gleet, and has thoroughly and successfully been treated with mercury.

Never assume, as was formerly done, that mercury should be avoided when syphilitic sores ulcerate; on the contrary, when used with iron, quinine, and opium, it will almost always prove the means of cure.

Do not forget that the safety of the eye in syphilitic iritis depends, however, mainly upon the promptitude and efficiency with which atropine is employed.

Never forget to examine for retinitis and choroiditis if a syphilitic patient complains of failure of sight or *muscæ*, and use mercury smartly if you find either.

Never neglect local measures in the lesions of intermediate and tertiary stages of syphilis.

Remember that a node of secondary syphilis usually disappears or is prone to ossify, but a tertiary like other gummata are more liable to suppuration and caries.

Do not open a syphilitic bubo unless acutely suppurating, or a node of bone; they usually absorb.

THROAT.

In cut throats where the trachea has been opened never neglect to remove all small fragments which hang loose in the trachea, or they will swell and eventually stop respiration.

Never leave a scald of the glottis a minute without tracheotomy tubes and knife placed at hand.

Do not neglect to warn your patient that the food may run away after tracheotomy through the tube for the first few hours.

Never neglect or think lightly of stab wounds of the neck.

In cedema of glottis due to syphilis, erysipelas, wounds of glottis, scalds, always have the tracheotomy instruments by the bedside.

Remember that in stab wounds of the upper part of the neck with arterial bleeding, there is an impossibility in many cases of distinguishing the exact source of the hemorrhage, so numerous are the great vessels in that region. Apply a ligature to common carotid or external carotid if excessive.

Remember that tracheotomy and insertion of tube is especially necessary in wounded epiglottis or arytenoid cartilages.

Always secure your tracheotomy tube by knotting the tape. Little patients are apt to drag at a loop.

Remember diffuse cellulitis of the neck is very fatal.

Avoid sutures in cut throat, when the windpipe is opened.

Never put silk or silver ligatures into a wounded œsophagus; only use catgut.

Never forget that fractures of the laryngeal cartilages are of serious importance; the nearer the cords, the acuter the symptoms, the more decisive must be the treatment. If the fragments are displaced and the mucous membrane lacerated or perforated by the fragments (as testified by emphysema and blood spitting) tracheotomy must immediately be performed.

Never neglect in all sudden dyspnoea in a child to pass your finger into the upper part of the larynx to search for a foreign body.

Sanction no delay in removing a foreign body known to be in the larynx.—Invert.

Never hesitate in foreign bodies in trachea to invert the patient after the tracheal incision has been made for the extraction of the foreign body. Never use forceps, rather invert the patient, or use a hook, bent probe, or wire snare, inversion, succussion.

But never invert unless you have your tracheotomy instruments ready, for the danger of instant suffocation, through lodging of the foreign body in the glottis, is great.

Never forget that lung disease invariably ensues on the retention of a foreign body in the bronchus.

WARNINGS TO PATIENTS AND THEIR FRIENDS.

Never forget to warn your patient that a Colles' fracture, even when treated with the greatest care, leaves some deformity.

Never forget to warn a case of fracture of the patella, that the fragments tend to separate.

Always warn your patient that there may be loss of power of deltoid after dislocation of shoulder if much pain is experienced, *i. e.*, the nerves have been pressed upon.

Always warn the patient or his friends of the possibility of suspension of growth, in injury to a epiphyseal cartilage.

Never forget to warn the parents of a hare-lip that one operation is usually inadequate.

Never forget to warn your patient that the loose cutaneous anal tags swell after an operation for piles, or he may suppose you have overlooked them.

Never forget to warn your patient that a Meibomian cyst fills with blood after being scooped out, or he will think that the operation has been performed slovenly.

Always warn the patient's friends that fluid taken by the mouth may run out through a tracheotomy wound for the first few hours, and that such is not due to a wound of the gullet.

WOUNDS.

Never forget that the surgeon who neglects to suture a divided nerve or tendon commits the same mistake as he who neglects to reduce a fracture.

Never forget the tripod of successful healing of wounds has three legs—asepticism—rest—coaptation of edges.

Never forget that if an operation wound suppurates the fault lies with the operator or his assistants.

At the Hunterian Society Dr. Cotman showed a case in which flushing and profuse sweating occurred upon one side of the face whenever the patient attempted to eat. There had been suppuration of the parotid gland on that side, and it was thought that in the resulting disorganization some fibers of the facial and auriculo-temporal nerves (the latter supplying the affected skin) had communicated. When food was taken, the usual stimulus through the glosso-pharyngeal nerve passed along the facial to its

normal destination in the salivary glands, and part was deflected along the auriculo-temporal to the cutaneous glands.

PIEREZ, a West Indian practitioner, reports remarkably favorable results from the use of diuretin in a case of cardiac dropsy. The patient's legs were so enormously distended that she could not move them. In two weeks she was able to attend to her household duties.—*British Med. Journ.*

TRINITINE is recommended to prevent accidents from the use of cocaine as a local anæsthetic. One drop of the centesimal solution should be given a minute before the cocaine is used, and repeated at intervals if the pulse be not affected and no flushing felt.

PEARSON states in the *Lancet*, that he has treated several hundreds of cases of typhoid fever in South Africa, without a single death. His specific remedy is the solution of chlorinated soda, of which he gives 15 minims every three hours, continued until the temperature has been normal for two successive evenings.

INCESSANT hiccough, occurring in a man who had a dilated stomach, was treated by E. J. Brown (*Med. Record*) by washing out the stomach. About two quarts more came out than was introduced through the tube; the food being in a state of fermentation. The hiccough entirely ceased, and the patient slept for the first time in sixteen days.

TREATMENT OF PNEUMONIA.—In summarizing the conclusions to be drawn from this brief paper we would say:

In the beginning of an attack of pneumonia, and especially when biliousness is present, marked benefit will be experienced by the administration of a few small doses of calomel. Let ethyl iodide be freely inhaled, not only for its supposed specific effect upon the pneumococcus, but also because of the relief it affords the pulmonary symptoms. In all severe and particularly grave cases with the free use of alcohol let the patient also receive the nitrite of sodium or a one per cent. solution of nitro-glycerine. Should these fail in their intended action to relieve the embarrassed circulation, and the patient being robust and plethoric, he may be carried over a critical period by the abstraction of twelve or sixteen ounces of blood.—Jenckes, *Med. Record*.

TREPHINING FOR TRAUMATIC EPILEPSY.—In the *Lancet*, December 5, 1891, is described a case upon which Mr. Pick operated. Dr. Penrose made the following remarks concerning the case:

"This case is involved in considerable obscurity, both as regards the cause of the fits and as to the way in which the operation relieved the patient. From the character of the fits it seemed fair to conclude that there was some irritation of a definite area of the cerebral convolutions in the neighborhood of the fissure of Rolando; and from the fact that the symptoms followed within a fortnight after a severe injury to the head, severe enough to produce concussion, there seemed reason to believe that this injury was the cause of the irritation. It was taking this view of the case that induced me to recommend the operation of trephining. But on the removal of the bone nothing abnormal could be discovered, beyond the bulging of the dura mater and the flattening of the

convulsions. Nevertheless, it can scarcely be doubted that, in some way or other the operation relieved the patient, since his last fit was on the operating table prior to the commencement of the operation. After the removal of the bone and the incision of the dura mater, without anything having been found to account for the fits, it was thought possible that there might be some collection of fluid either in the ventricles or in the substance of the brain, as there was undoubted flattening and bulging of the hemisphere where it was exposed. No such collection was found, nor probably did it ever exist, seeing that the boy was entirely relieved by the operation."

A SUPPURATING COMPOUND, COMMUNED FRACTURE INTO THE ANKLE-JOINT TREATED WITHOUT DRAINAGE.—William Clark, aged sixteen years, was admitted to the hospital September 29, 1891. A day or two before admission, while attempting to board a freight train he slipped and caught his left foot, he does not know how, in the gear of the car, and sustained a compound fracture of both malleoli. On admission the boy was suffering greatly. His temperature was 39.4° C., his pulse 132. The left foot, ankle and leg were much swollen. There was an angry blush about the ankle which extended downwards to the toes and upwards to the middle of the leg. Over the inner malleolus was a transverse wound about 6 cm. long through which projected the lower inner edge of the shaft (the upper fragment) of the broken tibia. Both malleoli were broken square off. There was some comminution of the inner malleolus and of the lower end of the tibia. The joint was suppurating.

Operation.—The ankle-joint was fully exposed by the usual external lateral incision. Through this incision the cartilage was sawed off from the tibia, the astragalus excised and the cartilage chiseled away from upper surface of the os calcis. A longitudinal incision into the joint was then made from the inner side. Through this incision the fragments of the internal malleolus and of the tibia were extruded. A few additional longitudinal incisions were made through the tissues, which were particularly tense. Then a slow but vigorous massage was practiced for some minutes to relieve the tissues of the great tension which existed. I was surprised at the rapidity with which the serum escaped through the cuts and at the amount of the transudate. In a few minutes the swelling of the foot, leg, and ankle was dissipated. Had it not been for these long and numerous cuts we should have been obliged to remove the Esmarch bandage before practicing the massage. The propriety of exercising massage in such a case without the Esmarch bandage might be questioned. The Esmarch was removed temporarily to enable us to ligate the larger vessels. It was then replaced for the final disinfection of the wound; the leg was placed in a bath of corrosive sublimate (1-1,000) for about three minutes, and then in a bath of carbolic acid (1-20) for about three minutes. No stitches were taken. The wounds were covered with gutta-percha tissue, and the dressing applied before the Esmarch bandage was removed.

The patient's temperature declined rapidly to the normal point. He has not had an unfavorable symptom since the operation.

The wound is dressed to night for the first time since the operation. You will observe that there is no redness nor swelling of the limb.

The blood-clots are more or less completely organized. The clot which fills the ankle-joint is break-

ing down on the surface ; but in a week or ten days the granulations will everywhere be even with the surface. This method of treating such cases is surely preferable to that which stuffs the dead spaces with gauze or drainage tubes. I would emphasize the following points in the treatment of cases like this one :

- 1. Excise cartilaginous surfaces and thus avoid having dead walls for dead spaces.
- 2. Make free anti-tension incisions to relieve tension and to enable one to practice massage protected by the Esmarch bandage.
- 5. Remove the Esmarch bandage temporarily to ligate the principal vessels.
- 4. Use as few and as fine ligatures as possible. Avoid tight and unnecessary stitches.
- 5. Disinfect the limb, protected by the Esmarch bandage, just before applying the dressing.
- 6. Apply the dressing before the final removal of the Esmarch bandage.

—Halstead, in *Johns Hopkins Hospital Bulletin*.

Medical News and Miscellany.

THE Morgue at Paris is being utilized as a practical school of legal medicine.

THE Maltine Company is sending out a very pretty calendar for 1892.

THE *British Medical Journal* says that the special liability of American tourists in Europe to typhoid fever is probably due to the use of iced water.

SPEAKING of the increasing prevalence of typhoid fever in Cork, a journal of that city remarks that "as long as the practice of poisoning salmon in the river Lea (from which the water is supplied to the city) is permitted, the water supply cannot be regarded as satisfactory." We should think not ! Dublin blames her typhoid fever upon the eating of oysters.

CHICAGO has got a Temperance Hospital, and the hospital has got \$100,000. This with the World's Fair ought to make Chicago very contented. It will be a relief also to those from Eastern lands of steady habits, to know that when they visit Chicago they can go to a temperance hospital if ill. Chicago is getting almost everything. Some day, we trust, it will have a medical journal.—*Med. Record*.

AMULETS.—"You are too young to know anything about it, my boy, but before such delightful and excellent temples of learning as Haverford College Grammar School were dedicated to Wisdom in the country places, your old father can recall the time, when if there was any rumor of whooping-cough or scarlet fever or anything of the sort in the neighborhood, every child in the district was at once decorated as to the neck with a little flannel bag—not unlike an Indian's 'medicine bag,' containing brimstone and asafoetida. This amulet was believed?"

"Believed?"

"It was known to ward off fevers of all kinds, coughs, colds, croup, pleurisy, eczema—horn all, quarter-crack, spavin, ringbone, blind staggers, and spring halt. And when we all got together and sang the opening hymn in a small room made tropical by the burning fiery furnace of a Franklin stove, heated 'one seven times more than it was wont to be heated,' the effect was appalling. How the teacher of that day ever lived I don't know. He must have had a nose like a winter radish. I suspect that in self-defense he wore an amulet himself."

—R. J. Burdette.

THE best coca preparations we have ever used are those made by Dr. C. L. Mitchell. His coca wine is much superior to Mariani's in coca strength and in the quality of the excipient. Coca bola is the best form of this drug for use in treating inebriates, and is not open to the objections made to the hypodermic use of cocaine. Like many other excellent products of our Philadelphia pharmacies, if they are not extensively employed, it is because they are not advertised.

THE position of assistant in the Midwifery Dispensary, 314 Broome Street, New York city, is open to practitioners and recent graduates of any recognized medical college. Each assistant will examine a number of pregnant women at the Dispensary and personally conduct the confinements, and after-treatment of the mother and child at the homes of the patients in the vicinity. The fee for the course of two weeks is ten dollars. At the present time over one hundred cases a month are delivered.

WEEKLY Report of Interments in Philadelphia, from December 12 to December 19, 1891 :

CAUSES OF DEATH.		CAUSES OF DEATH.	
	Adults.		Adults.
Abscess.....	3	Hernia.....	1
Aneurism of the aorta.....	2	Inanition.....	1
Apoplexy.....	17	Influenza.....	52
Asthma.....	2	Inflammation bladder.....	1
Bright's disease.....	3	" brain.....	3
Burns and scalds.....	1	" bronchi.....	14
Cancer.....	17	" kidneys.....	3
Casualties.....	6	" heart.....	2
Cerebro-spinal meningitis.....	1	" lungs.....	68
Congestion of the brain.....	2	" pericardium.....	4
" lungs.....	5	" peritoneum.....	4
Childbirth.....	1	" pleura.....	2
Cirrhosis of the liver.....	2	" s. & bowels.....	3
Consumption of the lungs.....	57	" uterus.....	1
" bowels.....	1	" tonsils.....	1
Convulsions.....	15	Intussusception.....	1
Croup.....	20	Locomotor ataxia.....	1
Cyanosis.....	1	Lymphadenoma.....	1
Debility.....	4	Malformation.....	1
Diabetes.....	3	Marasmus.....	4
Diarrhoea.....	1	Old age.....	27
Diphtheria.....	1	Paralysis.....	14
Disease of the heart.....	39	Poisoning.....	1
" kidneys.....	30	Pyæmia.....	1
Dropsy.....	2	Rheumatism.....	1
Dysentery.....	3	Sclerosis.....	1
Effusion of the brain.....	1	Septicæmia.....	2
Epilepsy.....	1	Softening of the brain.....	1
Enlargement of the prostate gland.....	1	Suffocation.....	1
Fatty degeneration of the heart.....	3	Suicide.....	1
Fever, puerperal.....	1	Tabes Mesenterica.....	1
" remittent.....	1	Teething.....	3
" scarlet.....	14	Tetanus.....	1
" typhoid.....	2	Tumor.....	1
Gangrene, senile.....	1	Ulceration of the bowels.....	5
Hemorrhage from stomach.....	1	Uræmia.....	3
" uterus.....	1	Whooping cough.....	3
		Total.....	385

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